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Experiences of Resilience and Adversity in Rowing:

A Grounded Theory

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Experiences of Resilience and Adversity in Rowing:

A Grounded Theory

by

Taylor Richard Brown, B.A.

Thesis

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Dedication

-To Mom and Dad.
Thank you for the endless support.

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Thank you to my advisor Jan Todd for the continued support and guidance through this process. Thank you Matt Bowers for your words of wisdom and quick wit.

Experiences of Resilience and Adversity in Rowing:

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The University of Texas at Austin, 2015

Supervisor: Janice Todd

Objective: Psychological resilience has been studies in the context of childhood and adolescent athletes and in elite athletes. Therefore a gap has formed in the part of the athlete population referred to as non-elite athletes. The objective of the present study was to explore the experiences of resilience and adversity in this non-elite athlete population and compare the findings to existing literature on elite-athletes to determine similarities and differences. Design and Method: Twelve non-elite rowers (8 women, 4 men) were interviewed regarding their experiences with resilience and adversity in rowing. A semi-structured interview guide was used to direct the interviews. Transcripts were coded and analyzed in accordance with a grounded theory methodology, and a substantive theory was formed through an iterative process of memoing, constant comparison, and theoretical sampling. Results and Conclusions: The findings suggested that there were a number of similarities in underlying processes of resilience in non-elite and elite athletes. The differences that were identified arose in the degree to which the athletes practiced resilient mechanisms.

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If you can keep your head when all about you
Are losing theirs and blaming it on you,
If you can trust yourself when all men doubt you,
But make allowances for their doubting too;
If you can wait and not be tired by waiting,
Or be lied about, don't deal in lies,
Or be hated, don't give way to hating,
And yet don't look too good, nor talk too wise:

If you can dream – and not make dreams your master;
If you can think – and not make thoughts your aim;
If you can meet with Triumph and Disaster
And treat those two imposters just the same;
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
And stoop and build'em up with worn-out tools:

If you can make one head of all your winnings
And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings
And never breath a word about your loss;
If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them: 'Hold on!'

If you can talk with crowds and keep your virtue,
Or walk with kings – nor lose the common touch,
If neither foes nor loving friends can hurt you,
If all men count with you, but none too much;
If you can fill the unforgiving minute
With sixty seconds' worth of distance run.
Yours is the Earth and everything that's in it,
And – which is more – you'll be a Man, my son!

- Rudyard Kipling

Introduction

In 1992, Kerri Strug, a fourteen-year-old up-and-coming gymnast, earned the bronze medal at the Barcelona Summer Olympic Games. This was the highlight of Kerri's gymnastic career, but she wanted more. Over the next four years her road back to the Olympics would be very rough. Between 1992 and 1995, she trained under four different coaches, and in 1994 suffered a major back injury, which made doctors question if she was ever going to walk again. However, despite the odds, Strug had an unwavering determination to realize her dream of Olympic gold. In the 1996 Atlanta Summer Games, Kerri found herself, her coach, Bela Karolyi, and her teammates, Shannon Miller, Dominique Moceanu, Dominique Dawes, Amy Chow, Amanda Borden, and Jaycie Phelps, in a very familiar position: competing for Olympic gold. The U.S. team had a commanding lead in the all-around competition over the Russian team by .897, an almost insurmountable deficit. This would be the first all around gymnastics gold medal for the U.S. in Olympic history; it was their time. The gold was all but in the U.S. team's back pockets, and their star gymnast, Dominique Moceanu, was lining up to lock in the win on the vault. Astonishingly, Dominique's first vault was unsuccessful; she landed off balance and slipped down to her seat, a rare miss. Undeterred, Dominique returned to the starting area, reset, and started down the 75-foot runway again. Once again, she was unsuccessful and fell when she landed, earning only a score of 9.2. The team was devastated; her teammates comforted her, but they all knew her performance might have cost them the gold medal. Strug's vault was all that stood between the U.S. team and an

all-around gold medal. She would have to perform very well to stay sufficiently ahead of the Russians. She lined up at the end of the runway, with focus plastered on her face. With a deep breath she raised her arms and fixed her gaze on the take off platform. With that she was away down the runway, took off, completed her turns, but landed awkwardly on her feet and fell backward. Upon landing, something in her left ankle popped; Strug did not know it, but she had torn two ligaments. She gingerly stood up with a shocked look and began to walk back to the start of the runway; she was limping. It was clear that there was something wrong; Strug was in pain. As she walked, she looked at her coach, Karolyi, for encouragement. He looked her directly in the eye, and said, " You can do it Kerri, you can do it." She reached the beginning of the runway, rolled her injured ankle around a few times with her hands, and then proceeded to line up for her second vault. She raised her arms, fixed her gaze, and began her approach. All of the sudden it was like there was no pain, only focus and raw determination to win. She hit the platform, completed the vault, and stuck the landing, on one leg. After presenting to the judges, Strug collapsed on the ground in pain. She had done it; Strug had secured the gold medal for the U.S. team.

Strug's story is a shining example of the resilience of the human spirit. She was repeatedly put in extremely demanding situations and rose to the occasion. After seeing performances such as hers there are many questions that arise about Strug's performance that day. How was she able to overcome an unexpected setback, and a very painful injury to pull off the vault that secured victory for her team? What helped her persevere through that time after the 1992 Olympics when she was shifting around from coach to coach, trying to find the right fit? How did she return after a severe back injury that nearly left

her paralyzed? Where did her motivation come from to continue after so many setbacks? These questions boil down to one central question, how did Strug remain resilient through these experiences? Said another way, how was she able to face these stressors, and still able to thrive? Did Strug posses something that normal people don't? These are questions asked by many people in reference to high performance athletes and even about the "normal" everyday athlete. Sports broadcasters will commonly comment on the resilience of players or teams who have overcome the odds and succeed despite setback. For example, Cal Ripkin Jr. set a consecutive games played streak of 2,632. During this time Ripkin had to play, and perform, through multiple injuries, including a herniated disc. Many tout Ripkin as one of the most resilient baseball players to play the game. So what is it that sets high performance athletes apart from your everyday, weekend warrior? Is it commitment level, motivation, resources? Or is the differentiating factor between an everyday athlete and an Olympic champion the ability to be resilient through failure? Do high performing athletes view things like failure, setback, adversity, and everyday stressors differently than everyday athletes? For example, is the way an eighteen-year-old Strug views adversity different from the way a 62-year-old, competitive rower who started rowing when he was 45 as a hobby? Are Olympians and elite athletes who set themselves apart by overcoming great odds some kind of super humans? David Epstein, author of the critically acclaimed book, *The Sports Gene,* argues that what sets high performance athletes apart from everyday athletes is more biological than environmental (Epstein, 2013). However, before Epstein, a number of researchers interested in resilience were already looking at the biological roots of the phenomenon (Block & Block, 1980; Flach, 1988; Curtis & Cicchetti, 2003, Masten & Garmezy, 1985). Wagnild and Young

(1993), for example, understood resilience as personality characteristics that moderate the negative effects of stress and promote adaptation. Similarly, Curtis and Cicchetti reported that although there are a number of environmental factors at play, there are certainly traits that influence a person's response to environmental stressors:

> The confluence of a number of factors including physical status, genetic makeup, prior experience, and developmental history, determine the differential ways in which organisms may react to a stressful event. In particular, the combination of genetic makeup, prior experience, and developmental history could either sensitize or protect the organism from subsequent stressful challenges.(p.791)

With this being said, perhaps the difference is in the ability between elite and non-elite athletes to tolerate stressors does not lie completely in genetic makeup, but rather in the interaction between genetic makeup and environmental influences. Then the question becomes, what are these environmental factors that influence the ability of people to thrive or flounder when faced with adversity? Horowitz's Structural Behavior model says, "The adequacy of the development of an individual in a particular domain is the result of individual organismic factors acting in relationship to aspects of the environment that in turn facilitate or impede development"(Horowitz, 2014, p.98).

Perhaps everyone has the ability to be resilient, however, in order to attain resilience, they must have the right combination of environmental factors to complement their biological traits. Masten (1999) argued that resilience is "ordinary magic" that everyone has the capacity to cultivate:

> The biggest surprise that emerged from the study of children who overcome adversity to become successful youth and adults in society was the ordinariness of the phenomenon. Captivating stories of resilient individuals may have created misleading perceptions that resilience is rare and results from extraordinary talents or resources. Evidence strongly suggests, on the contrary, that resilience is common and typically arises from the operation of basic protections. (p.7)

Conversely, Sheard and Golby (2010) suggest that certain psychological profiles appear to distinguish elite competitors from sub-elite performers:

> Hardiness is conceived as an individual's propensity to manage the demands of situations ranging from absolute resilience to extreme vulnerability. The findings of the present study show that hardiness is a psychological characteristic that distinguishes elite-level sport performance from their sub-elite counterpart. (p.161)

The current study is meant to elucidate the relationship between perceptions and processes of resilience at the elite and non-elite levels. Recent research in measurement (Sarkar & Fletcher, 2013) and intervention strategies for team athletic performance (Morgan, Fletcher, & Sarkar, 2013) and individual athletic performance (Sckinke & Jerome, 2002; Sckinke, Peterson, & Couture, 2004) on the elite scale sets up the field for research centered at understanding how these elite models can be applied and compared to models of resilience in the everyday athlete. Not every athlete can compete at the Olympic level, but do all have the capacity to overcome challenge as elite athletes do? What differentiates non-elite from elite athletes in the context of resilience? This study will answer these questions by breaking down resilience into its fundamental components and attempting to explain how resilience works in non-elite rowing.

Review of the Literature

Defining Resilience

Resilience has been defined as "successful adaptation despite risk and adversity" (Masten, 1994 p.3). This is a relatively vague definition that leaves room for questions like, what leads to adaptation? Luthar, Cicchetti & Becker (2000) expanded on Masten's definition by conceptualizing resilience as a "dynamic process encompassing positive adaptation within the context of significant adversity." This brings the definition closer to what is really happening by adding in the word "process," however, it seems there are still aspects of the definition that are vague. For example, what exactly is a "process" in the context of resilience? The reason these two definitions seem to not capture the full essence of resilience is because they have combined together what resilience is, and how resilience occurs. Luthar and colleagues (2000) argued that resilience has occurred if two conditions are met, 1) exposure to some significant threat or severe adversity, and 2) the achievement of positive adaptation despite major assaults on the developmental process (Sarkar & Fletcher, 2013; Luthar, Cicchetti & Becker, 2000; Masten, 1994; Masten, Best & Garmezy, 1990; Kumpfer, 1999). Luthar (2003) made it very clear that resilience is something that cannot be measured, rather it is a phenomenon that requires the "dual-co-existence" of both parts: adversity and positive adaptation. These conditions answer the question, what is resilience. How resilience occurs, however, is a much more complex question to answer. Unlike the question of what resilience is, which has been pretty much

agreed upon as what Luthar and colleagues (2000) and Luther (2003) posited, how resilience occurs is still surrounded by a large amount of dissent in the research.

Research on resilience originally was centered on the opposite of resilience: vulnerability. Werner (1993) reported their original intent in their early work, "We began our study by examining the children's vulnerability, that is, their susceptibility to negative developmental outcomes after exposure to serious risk factors" (p.503). Early longitudinal studies conducted over the course of forty years by Werner and colleagues on high-risk children on the island of Kauai, Hawaii, found that there were certain children, about one third of the sample, who were exposed to the same risk factors such as socioeconomic disadvantages, poverty, and physical abuse were able to adapt and grow into "well adjusted" functioning members of society. Werner and colleagues wondered what it was about this part of the sample that contributed to their stunning ability to thrive in the face of such risk. What Werner and colleagues concluded was that there were a number of protective factors that differentiated well-adapted children from those who failed to thrive (Werner et al. 1971; Werner & Smith, 1977; Werner & Smith, 1982; Luthar, Cicchetti & Becker, 2000). Werner's pioneering body of work highlighted multiple protective factors and risk factors in development. Werner understood children who were "at risk" as those who were born and reared in chronic poverty, had experienced perinatal trauma, lived with families troubled by chronic discord, disorganization, parental psychopathology, and substance abuse (Werner & Smith, 1982). Therefore those variables were considered "risk factors." Werner identified multiple categories of protective factors including, but not limited to, factors within the individual (e.g. an "easy" temperament, combination of autonomy with ability to ask for help when

needed), within the family (e.g. a supportive parental figure and/or family member) and within the community (e.g. an influential teacher and/or coach) (Werner et al. 1971; Werner & Smith, 1977; Werner & Smith, 1982; Werner, 1993). Werner and colleagues observed that infants, who eventually became resilient, had different temperaments than infants who did not become resilient. These "temperaments" would be considered characteristics, and therefore were influenced by genetic materials. Further, they observed that resilient adolescents all had at least one supportive caregiver in their family and many had additional support systems in the community. These types of protective factors would be viewed as an environmental influence and therefore would be a result of a person's interaction with their world. However, Werner placed a great deal of emphasis on the internal characteristics of the children, and less on the external factors that were interacting with internal characteristics.

While Werner's work primarily concentrated on the characteristics of individuals that makes them more resilient, other researchers extended the base that she built and started to question individuals interactions with environmental factors. Egeland, Carlson, & Sroufe (1993) viewed resilience not as an innate characteristic, but rather as a transactional process between the person and environment. What this means is instead of resilience being viewed as a static concept, as something that an individual has and will always have, it is viewed as something that occurs and is cultivated as a result of interactions (Galli, 2005). Recent dissonance in the literature centers on the qualities of the concept. That is, how should resilience be viewed? Is it something that can be changed or is it a static concept that people have or do not have? As alluded to in the Werner research, there are different ways researchers have understood the concept.

Kaplan (1999) eloquently stated a series of questions, which elucidate the distinctions in views (and semantics) of this concept. He writes:

> Should resilience be defined in terms of the nature of the outcomes in response to stress or in terms of the factors, which interact with stress to produce the outcomes? Is resilience the variation in good outcomes among individuals who are at-risk for bad outcomes, or is resilience the qualities possessed by individuals that enable them to have good outcomes? (p.19)

In this excerpt Kaplan makes the distinction between resilience viewed as a trait and resilience viewed as an outcome. A third, and now more common, way to view resilience is as a person-environmental interactional process (Kumpfer, 1999), in which a multitude of factors, interactions, and processes are included in the characterization of the concept. Although resilience has been defined in a number of ways, the most accepted definitions are multi-faceted in nature.

Resilience has been conceptualized as a trait (Connor & Davidson, 2003; Waglid & Young 1993; Miller, 1988; Garmezy, 1993; Beardslee & Podoresky, 1988; Rabkin et al., 1993; Antoni & Goodkin, 1988; Rutter, 2003), a process (Rutter, 1985, 1987; Egaland, Carlson, & Stroufe, 1993, Flach, 1980,1988; Fonagy et al., 1993; Fine, 1991), and as an outcome (Kaplan, 1999; Rutter, 1990). As a trait, scholars view resilience as the personal qualities that enable one to thrive in the face of adversity (Flach, 1988; Connor and Davidson, 2003). Although many disagree that resilience can be measured (Masten, 2014; Kaplan, 1999; Kumpfer, 1999), Connor and Davidson (2003) developed a scale to measure resilience in adults. They compiled a list of characteristics of resilient people from previous studies on resilience (Kobasa, 1979; Rutter, 1985; Lyons, 1991), and then developed those characteristics into questions. Table 1 lays out the characteristics used by Connor and Davidson (2003) in their development of *The Connor-*

Davidson Resilience Scale (CD-RISC). From the characteristics, Connor and Davidson formulated questions such as: *Do you tend to bounce back quickly after illness or hardship? Do you feel like you are in control of your life? Do you like challenges? Do you give your best effort no matter what?* These questions are related to perceptions of control, adaptability to change, having an action-oriented approach, and viewing stress as a challenge to overcome. In this view, people are born with a set of traits, which can be measured, and those who are resilient will be able to overcome adversities, and have positive adaptation, while others will experience similar adversity, and will not adapt as well. Galli (2005) warns to the danger of labeling resilience as a trait, because then it implies that people who do not bounce back from adversity are all of the sudden at fault, with no way to improve.

Second, resilience has been understood as an outcome. When resilience is viewed as realizing a desired outcome over a more undesirable outcome, the person has been able to engage in resilient functioning. Rutter (1990) described resilience as the phenomenon of "maintaining adaptive functioning in spite of serious risk hazards" (p.209). Resilience as an outcome is conceptualized separately from the individual. Although the process of practicing resilience may rest in the hands of the individual, resilience, in this view, does not occur until a positive outcome has transpired. Commonly, the conceptions of resilience as a process and an outcome complement each other because outcomes are present in the process of resilience (Kumpfer, 1999).

Lastly, viewed as a process, resilience is characterized as a "complex social system that cannot be seen as anything other than a set of social and intra-psychic processes which take place across time given combinations of individual attributes,

family, social and cultural environments" (Fonagy et al. 1993, p. 233). Egeland, Carlson, & Sroufe (1993) explained resilience as, "developing over time through an integration of constitutional and experiential factors in the context of a supportive environment." In the context of sport, Galli (2005) eloquently articulated how one would look at resilience in a golfer as a process, rather than a trait or outcome:

> Resilience in this case would be the culmination of an intricate process whereby several factors from within the golfer, the past experiences of the golfer, and the environmental context in which the golfer resides interact to allow her to successfully recover from the poor round. In this case resilience would not be defined as a result of a specific moderating personality characteristics. (p.12)

Reference	Characteristic
Kobasa, 1979	View change or stress as a challenge/opportunity
Kobasa, 1979	Commitment
Kobasa, 1979	Recognition of limits to control
Rutter, 1985	Engaging the support of others
Rutter, 1985	Close, secure attachment to others
Rutter, 1985	Personal or collective goals
Rutter, 1985	Self-efficacy
Rutter, 1985	Strengthening effect of stress
Rutter, 1985	Past successes
Rutter, 1985	Realistic sense of control/having choices
Rutter, 1985	Sense of humor
Rutter, 1985	Action oriented approach
Lyons, 1991	Patience
Lyons, 1991	Tolerance of negative affect
Rutter, 1985	Adaptability to change
Current	Optimism
Current	Faith

Table 1: Characteristics of Resilient Individuals as Defined by Connor & Davidson (2003) (p.77)[1]

[1] Approval from publisher to reproduce table is pending.

Models of Resilience

There have been a number of models of how resilience works in multiple contexts of interests that include, but are not limited to: promoting resilience during early childhood (Reynolds and Ou, 2003; Yates, Egeland & Sroufe, 2003; Ferguesson & Horwood, 2003; Werner, 1987), resilience and vulnerability in children with intellectual disabilities (Greenbaum & Auerbach, 1998), resilience in adolescence (Jessor, 1991), and positive outcomes of life crises and transition (Schaefer & Moos, 1992). Others have taken a step back to look at the concept of resilience on the grander scale as it can be applied to a variety of contexts (Richardson, 2002; Richardson et al. 1990, Kumpfer, 1999). Nonetheless, most have concentrated on children because of the opportunity to make a difference in the lives of underserved children who had a high probability of experiencing developmental issues later in life (Masten, 2014).

When developing models of resilience, although researchers disagree about the nature of the concept (i.e. trait vs. outcome vs. process), many have displayed relative consistency in identifying the different components of the concept (Luthar, Cicchetti & Becker, 2000). Researchers have identified the three components of resilience as risk factors, protective factors, and positive outcomes (Kaplan, 1999; Rutter, 1990; Yates, Egeland, & Sroufe, 2003; Luthar & Zelazo, 2003). The definitions of these three components, however, have also been the subject of debate (Kaplan, 1999; Luthar, Cicchetti, & Becker 2000). Risk factors have been understood in three ways as probable negative outcomes, a predictor variable, and as a descriptor of negative life conditions (Kaplan, 1999; Rauh, 1989). The difference between the three understandings is not always clear and requires a nuanced understanding of risk factors. For example, in

children, risk factors as probable negative outcomes would include things like mental deficiency, psychopathology, and drug use. However, a very similar understanding of risk factors is as early predictors of unfavorable outcomes, such as pregnancy complications, perinatal health problems, developmental disability. Next, to make the definition of risk factors even more convoluted, they can also be understood as adverse environmental conditions, such as family conflict and poverty (Kaplan, 1999). In general, and for the purposes of fluidity in understanding, risk factors will be understood as factors present in a person's environment that render them vulnerable to adverse outcomes (Kaplan, 1999). Protective factors have been understood as a moderator of risk associated with better outcomes when risk is high (Masten, 2014). For example, a child with a risk factor of an alcoholic parent may have a protective factor of another positive adult influence in their life who may have acted as a "surrogate" parent (Werner, 1987) which may ameliorate or diminish the negative effects of the risk factor. Mirroring Masten's definition, Kaplan (1999) defined protective factors as "variables that mitigate the effects of risk factors or strengthen the ameliorative effects." Protective factors are numerous and often encompass more than one are of life. Garmezy (1993), working off much of the early studies Werner (1971, 1977, 1987) conducted, built a classification of protective factors which included personal attributes and characteristics, parental and familial factors, and lastly social support factors. Outcomes in resilience have been considered one of the most important components of resilience (Kaplan, 1999). Without outcomes, resilience would have little meaning, because there would be no way to determine if positive adaptation had occurred. Kaplan (1999) understood outcomes in two ways, either having reached a desired outcome, or having moved away from an undesired

outcome. If one thinks about outcome on a spectrum, these two statements begin to sound like the same thing, however, in certain contexts such as sport, for someone to be considered resilient merely means that they have sustained good performance despite setback. Therefore, sport is an example of someone being able to move away from an undesired outcome. In the same context, if an athlete had a series of risk factors, and had a particular goal to meet, and was able to meet the goal despite the risk factors, then the outcome would be reaching a desirable outcome.

To understand the interaction between risk factors, protective factors, and outcome variables, Galli (2005) suggests it is beneficial to think about the three components as independent, dependent, and moderator variables. Risk factors can be conceptualized as independent variables, which can be manipulated to change outcome variables, which can be understood as dependent variables. Protective factors can be understood as the moderating variables that influence the relationship between the independent and dependent variables.

Kumpfer (1999) conducted an extensive review of the literature in an attempt to organize the processes of resilience into a framework and a model. Notice how Kumpfer incorporated the three parts of resilience previously discussed, and was able to expand on the interactional aspects of the process. The framework expanded the three components of resilience to six major parts and incorporated both process and outcome views. The six major parts are: 1) the presence of stressors or challenges; 2) the external environmental context; 3) the person-environment interactional process; 4) internal self-characteristics; 5) resilience processes; and 6) positive outcomes. Figure 1 outlines the many aspects considered in resilience when Kumpfer (1999) built the resilience framework.

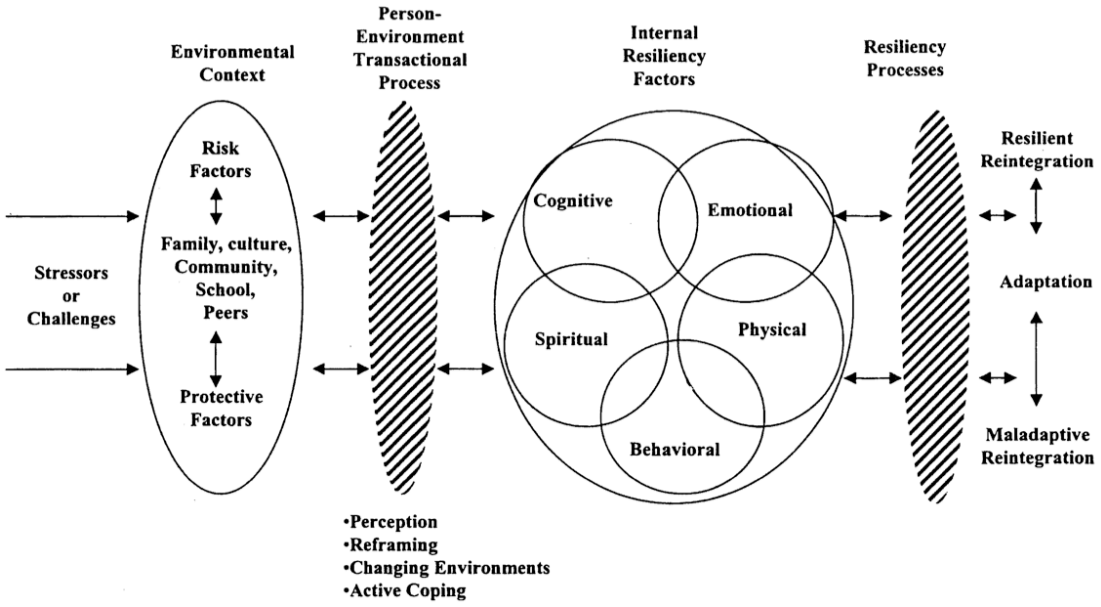

Figure 1: The Resilience Framework as constructed by Kumpfer (1999)(p.185)[2]

Kumpfer's framework not only illustrates the large number of factors that overlap and interact in the study of resilience, it also demonstrates how resilience, while behaving in a roughly sequential fashion, is fostered by forces as overarching as one's culture and as nuanced as one's personal spiritual belief system. Kumpfer presented all of the facets involved in creating an atmosphere where someone can demonstrate resilience.

Models of Resilience in Elite Sport

Two models for resilience in elite-athletes were the basis for comparison for the model generated from the current research. First, Fletcher and Sarkar's (2012) grounded theory of psychological resilience in Olympic champions was considered, and next Galli

[2] Approval from publisher to reproduce figure is pending

and Vealey's (2008) conceptual model of sport resilience was considered. Fletcher and Sarkar (2012) conducted life story interviews with 12 Olympic champions to explore the participants' experiences of withstanding pressure during their sporting lives. The findings of their study indicated that there were personality traits that allow these Olympic champions to deal with the pressures of competing at the international level:

> The findings indicate that numerous psychological factors (relating to a positive personality, motivation, confidence, focus, and perceived social support) protect the world's best athletes from the potential negative effect of stressors by influencing their challenge appraisal and meta-cognitions. These processes promote facilitative responses that precede optimal sport performance. (p.672)

The psychological factors mentioned can help protect athletes from the harmful effects of psychological stress, however, Fletcher and Sarkar's (2012) is not only a model of resilience as a trait. This theory has aspects of both process and trait conceptualizations. They have identified psychological characteristics (trait) and explored how they interact with each other in response to stress, how they develop, and the actual thought processes the athlete's experience (process). The challenge appraisals referred to the athletes' ability to view challenges as opportunities to get better instead of backing away from them:

> Olympic champions believed that stressors provided them with opportunities to develop a psychological and competitive edge over their peers and opposition. To illustrate, not being selected for a major international competition was frequently cited as ultimately a source of increased effort, and competition losses were viewed as learning opportunities for subsequent performances. (p.673)

So it was found that how these Olympic champions perceived challenge was pivotal in their ability to be resilient through stressors. The results indicated that the psychological traits identified, such as motivation, confidence, focus, etc. were responsible for influencing an athlete's challenge appraisals. Furthermore, psychological traits also

influenced the athlete's meta-cognitions, which were defined as, "…an individual's knowledge of, and control over, his or her cognitions." Specifically, Olympic champions were very self-aware of their goals, used psychological strategies (goal setting, imagery, self-talk, and relaxation) to control their cognitions, and were aware that their psychological experience had the ability to affect performance (Fletcher & Sarkar, 2012). The idea of these psychological traits interacting with challenge appraisals and meta-cognitions to produce optimal sport performance constitutes a process. However, the process seemed to begin with descriptions of the traits. This is one place where Fletcher and Sarkar were limited in that they mostly described the traits and their influence on challenge appraisals and did not spend a great amount of time discussing how the traits were acquired, and the processes influences those acquisitions. They mention this fact in their limitations section, "No research has presented a theoretical model, grounded in original data, that attempts to explain (rather than describe) psychological related phenomenon in Olympic champions" (Fletcher & Sarkar, 2012). Although the current study is not examining Olympic champions, it will attempt to explain psychological related phenomena related to resilience in sport. Figure 2 is Fletcher and Sarkar's (2012) grounded theory of psychological resilience and optimal sport performance model.

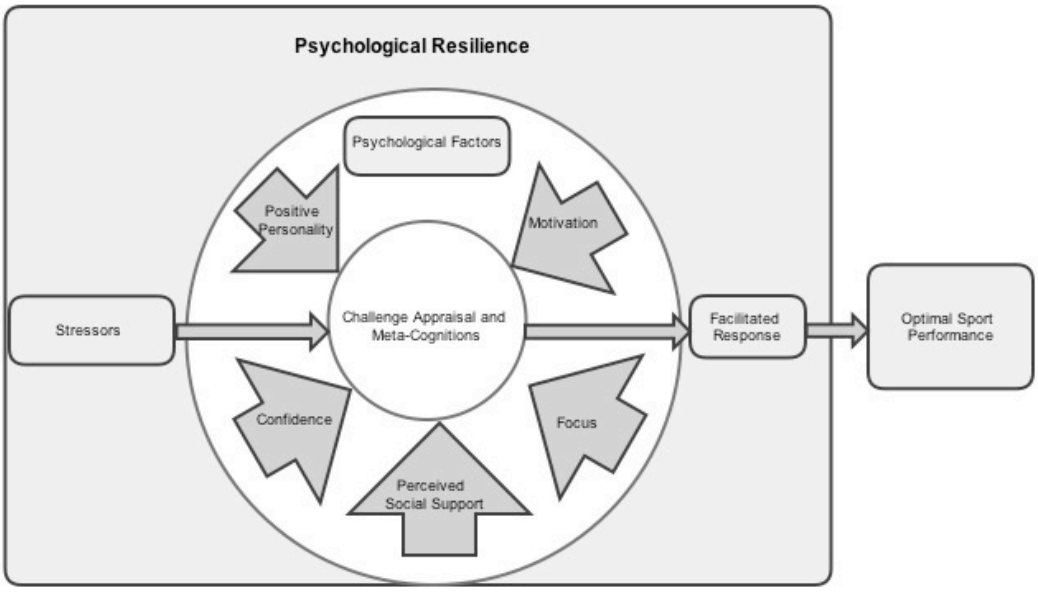

Figure 2: A Grounded Theory of Psychological Resilience and Optimal Sport Performance (Fletcher & Sarkar, 2012)(p.672)[3]

The second model that was a basis of comparison is Galli and Vealey's (2008) conceptual model of sport resilience. In their exploration into athletes' experiences of resilience, Richardson's (1990) resiliency model was used as a guiding theoretical framework. In short, Richardson's (1990) model said that after experiencing some kind of adversity, life event, or stressor, there occurs a disruption of a person's "biopsychospiritual homeostasis," where they then experience a period of disorganization. During this period of disorganization, a person will use "envirosocial supportive factors" to move toward reintegration to their biopsychospiritual homeostatic functioning. The reintegration can take four forms: 1) Resilient reintegration, where the disruption represents an opportunity for growth and increased resilience, whereby

[3] Approval from publisher to reproduce figure is pending

adaptation to the disruption leads to a new, higher level of homeostasis; 2) homeostatic reintegration, where the person returns to their pre-disruption baseline; 3) reintegration with loss, where the person establishes a lower level of homeostasis; or 4) dysfunctional reintegration, which is a state in which maladaptive strategies (e.g. self-destructive behaviors) are used to cope with stressors. Using this theoretical framework, Galli and Vealey (2008) set up their study from the beginning to consider the process and all outcomes of resilience rather than traits that lead to resilience. Proceeding, they conducted in-depth semi-structured phenomenological interviews with ten high level athletes. Their findings indicated that athletes developed coping strategies in order to mitigate the impact of stressors on their performance, "The heart of the resilience process for athletes was the use of a variety of coping strategies to deal with a wide range of unpleasant emotions and mental struggles…Adaptation was discussed as gradual, and often involved multiple shifts in thought. The model generated from this study refutes the popular notion of resilience as a trait" (Galli & Vealey, 2008). It was also suggested that resilience, contrary to popular models, did not occur in a sequential fashion, and required a certain degree of iteration, "Although all of the athletes discussed using coping strategies to deal with unpleasant emotions, the process of experiencing and coping with unpleasant emotions did not seem to occur in a sequential fashion. Thus the second stage of the model represents athletes' agitation, as they simultaneously struggled and coped with their adversity" (Galli & Vealey, 2008). The agitation stage is at the middle of the conceptual model, and really represents how unpredictable this part of the process can be. Figure 3 is Galli and Vealey's (2008) conceptual model of sport resilience. Similar to the Fletcher and Sarkar (2012), the conceptual model of sport resilience considers

sociocultural influences (e.g. social support and cultural/structural factors) and personal resources (e.g. achievement motivation, personality characteristics, and love of sport) as factors that influence the process of agitation. These influences are perhaps analogous to Fletcher and Sarkar's (2012) conceptualization of the traits that influence challenge appraisals and meta-cognitions. However, the difference between these two models, as Fletcher and Sarkar (2012) articulate, is how psychological factors interact with the environment:

> In contrast to the majority of existing theories, including the conceptual model of sport resilience (Galli & Vealey, 2008), the [grounded theory of psychological resilience and optimal sport performance] emphasizes that the influence of psychological factors should be conceived in relation to specific stressors encountered in the context in which they arise. (p. 675)

What this means is that an understanding of the psychological factors that influence resilience in athletes is incomplete without a comprehensive understanding of the environmental demands. In this way, the present study is situated well in the existing literature because it seeks to understand the factors that contribute to resilience through first attempting to understand the environmental factors at play and their influence on the athlete.

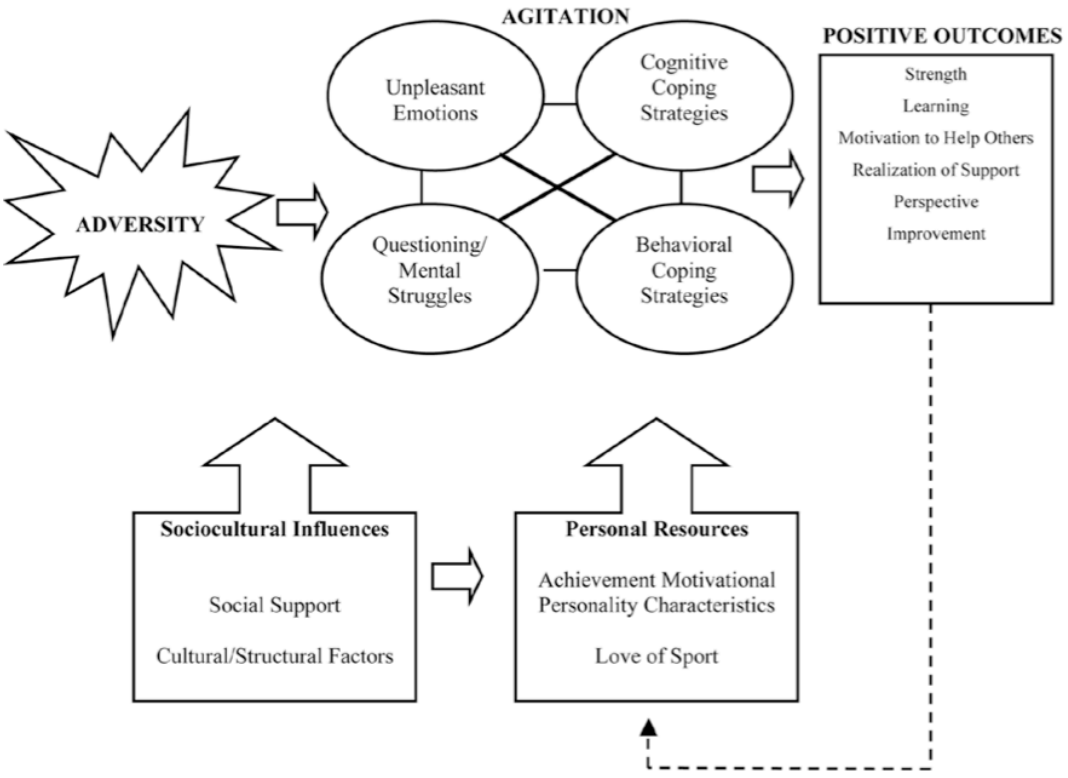

Figure 3: Conceptual model of sport resilience (Galli & Vealey, 2008)(p.324)[4]

After building our theory through an iterative, constant comparative process, the previous two models were the basis of comparison between elite and non-elite models of resilience in sport. Where appropriate, elements of other models were considered, such as Segilman et al. (1990) and Martin-Krumm et al. (2009), who both explored explanatory style as a mechanism of resilience, and Mellalieu, Neil, Hanton, and Fletcher (2009) and Arnold and Fletcher (2012) who described stressors encountered by competitive athletes.

[4] Approval from publisher to reproduce figure is pending

Purpose of the Present Study

The purpose of this study is to examine the experiences of adversity and the process of resilience in non-elite rowers. In the context of this study, the term non-elite is operationally defined as rowers who have not competed/ do not compete at the international/Olympic level. Therefore "non-elite" refers to those who row purely for enjoyment, and those who do it for competition at the "masters" level. "Masters" level rowing refers to rowers over twenty-three years of age who are not currently rowing on a college level team. The study of resilience in sports is relatively new and still in its nascent stages of theoretical development. Sports commentators frequently refer to teams or players who succeed despite setbacks as resilient. But what sets one player or team apart from one another? How does one achieve a resilient outcome while the other falters? Resilience in sport is unique because athletes typically face not only the demands inherent in competitive athletics (i.e. stressful performance situations, training/preparation, and team dynamics) but also the demands that are a part of their personal lives (i.e. personal finances, relationships). Recently, Arnold and Fletcher (2012) conducted a meta-interpretation of 34 studies that identified four categories and 31 subcategories of demands placed on athletes. The four categories were broken down into 1) leadership and personal issues, 2) cultural and team issues, 3) logistical and environmental issues, and 4) performance and personal issues. Among the 31 subcategories were: the coach's behavior and interactions, teammates personality and attitudes, structure of training, and injuries. Arnold and Fletcher's research was seminal in the continued study of resilience in sport because it formally established the stressors that athletes likely face during their careers. Recent research has largely concentrated on

identifying the processes and qualities that lead to resilient outcomes in elite athletes (Fletcher & Sarkar, 2012; Galli & Vealey, 2008; Mummery et al., 2004; Morgan, Fletcher & Sarkar, 2013; Schinke, Wendy & Jerome, 2002; Schinke, Peterson & Couture, 2004; Martin-Krumm et al., 2003).

In that regard, resilience research in sport, in particular, has been almost exclusively centered on elite athletes. With the exception of a few studies exploring sport based youth development (Berlin et al., 2007) and resilient youth development through sport (Martinek & Hellison, 1997; Allen, Cox & Cooper, 2006), research on the process of resilience in competitive athletes has only been conducted on the elite level (e.g. Olympic Champions, Division 1 athletes) (Fletcher & Sarkar, 2012; Galli & Reel, 2012). Recently, Galli & Vealey (2008) explored the resilience experiences of elite athletes through a phenomenological design and constructed a conceptual model of sport resilience. This model conceptualized resilience as a dynamic process rather than a trait or set of traits. Similarly, Fletcher and Sarkar (2012) investigated resilience in elite athletes using a grounded theory design. This model painted a distinctively different picture of resilience; namely, that it included more consideration for the influence of traits and considered different outcomes. These two studies will be the primary bases for comparison to the non-elite sport resilience model. (It is important to note that grounded theory protocol typically inverts the role that literature plays with regard to informing a current study (cf. Charmaz, 2006), so while we have demonstrated an understanding of the current state of resilience research, the integration of the findings within the literature will occur after the grounded theory has been developed, allowing the theory to emerge organically.)

Recent interest in the area of differentiating elite-sport performers from non-elite (or sub-elite) sport performers is only in the early stages of its development. Research has explored physical (Carter, Ackland, Kerr, & Stapff, 2005), physiological (Hoff, 2005), perceptual-cognitive (Singer & Janelle, 1999), and sociological (Baker, Horton, Robertson-Wilson, & Wall, 2003) differentiators between elite and non-elite athletes (as cited in Sheard & Golby, 2010). Sheard and Golby (2010) conducted the only systematic investigation of psychological traits as differentiators between elite and non-elite athletes. They administered *The Personal Views Survey* to a sample of 1566 elite and sub-elite athletes, roughly half and half, to generate an objective measure of hardiness for each athlete. Their results indicated that a psychological profile that included high levels of hardiness differentiated elite-level from sub-elite level athletes. However, a multivariate regression analysis suggested that hardiness could only explain 5% of the variance in the competitive standard and therefore differentiation between elite and non-elite is likely influenced by a much larger number of factors not accounted for. It is in this vein that extending this analysis from strictly quantitative to qualitative will shed valuable light on the question at hand.

Given the ambiguity in the literature concerning relationships between elite and non-elite models, the purpose of this study is to understand the patterns in the processes related to resilience within a sample of non-elite rowers and compare those to elite models. In so doing, this research should both extend the existing understanding of resilience into the realm of non-elite sport and inform the scientific discourse about resilience as trait, process, or outcome.

Method

Research Design

The current study adhered to the tenants of qualitative inquiry. A grounded theory "total methodology" (Weed, 2009), utilizing retrospective, semi-structured interviews, an iterative process, purposive sampling, theoretical sampling, and the constant comparative method (Glaser & Strauss 1967), was employed for data collection, analysis, and substantive theory building (Weed, 2009). The grounded theory methodology allows the interviewer to be unhampered by preconceived notions built around existing theory (Strauss & Corbin, 1994) by requiring researchers to first analyze the data, and then compare it to existing literature. With the goal to construct theory where none exists, the researcher remained flexible and open to all possible processes and outcomes (Glaser & Strauss, 1967; Glaser, 1992; Charmaz, 2006). Grounded theory is an appropriate methodology for this particular research because literature in the field of resilience in sport has situated itself at either end of the sport spectrum, by examining sport and resilience in underserved youth (Allen, Cox, Cooper, 2006; Hurtes & Allen, 2001; Hedstrom & Gould, 2004) and also in elite athletes (Galli & Vealey, 2008; Fletcher & Sarkar, 2012; Sheard & Golby, 2010). As a result, a hole in the knowledge concerning the experience of resilience in non-elite athletes exists. The use of grounded theory has historically been applied in situations where there is not an established, pre-existing theory in place with regard to understanding patterns in social processes (Strauss & Corbin, 1998; Weed, 2009; Fletcher & Sarkar, 2012).

Philosophical Assumptions

There are a number of philosophical assumptions that usually accompany grounded theory research and are congruent with the assumptions of the primary investigator. Methodologies are, or at least should be, underpinned by certain ontological and epistemological assumptions (Weed, 2009). The primary researcher approached the current study from a constructivist ontological perspective and an interpretivist epistemological perspective in concert with the assumptions accompanying grounded theory research as defined by Charmaz (2006). Ontology is concerned with the nature of reality; that is, are there objective truths/realities in this world, which are separate from individual perception (realism), or are there multiple truths/realities, which are constructed by individuals (constructivism). Epistemology is concerned with how knowledge of the social world is acquired; that is, can researchers objectively observe or measure phenomena (positivism), or must there be some kind of subjective interpretation in order to develop an understanding and objective observation is not possible (interpretivism). Although through the development of grounded theory there have been several variants in the philosophical assumptions, such as "Glaserian," which prescribes to a more positivist/realist approach (Glaser, 2002; 2008), "Straussian," which retains that there are elements of interpretivism and realism, and lastly "Constructivist" or "Charmazian," which creates meaning through interactions of the researcher and researched (Charmaz, 2006; Weed, 2009), thus taking a constructivist/interpretivist perspective, the primary researcher believes that objectivity in qualitative research is possible, however not probable, and therefore approached the current study making constructivist/interpretivist assumptions.

Data Collection Procedure

Grounded theory is referred to as a "total methodology" because the design provides a set of principles for the entire research process (Weed, 2009) At the heart of grounded theory is the idea of creating many iterations of analysis and theory, and comparing those iterations to advance the growing theory. Weed (2009) defined the iterative process as collecting data, analyzing the data, comparing them to the literature, and then collecting more data to fill in the gaps in understanding. These iterations are continued until theoretical saturation has occurred. Each part of the grounded theory methodology contributes to this iterative process. Following institutional ethics approval, a flyer and a club wide email was distributed to members of the rowing club. On the flyer it described the study, and asked for participants who had experienced the two conditions Luthar, Cicchetti, and Baker (2004) had defined as conditions for adversity to have occurred, 1) adversity had occurred, and 2) positive adaptation to adversity. Those who responded then received a demographic questionnaire that asked descriptive questions such as, age, sex, number of years rowing, if they had rowed for a national team, or were currently competing at a collegiate level. After participants returned their demographic questionnaires, they were notified if they had met the qualifications for the research, namely that they had not competed on a national team and were not currently a collegiate rower. If they did meet the qualifications, then they were scheduled for two interviews. Purposive and theoretical sampling served to target those specific individuals or samples that help refine the theoretical concepts that are being built in the process (Weed, 2009).

Twelve rowers from a local rowing club provided the basis for this exploration into the experiences of adversity and resilience in club-level competitive rowers. Participants were initially recruited for the study using purposive sampling, which means that those with the most appropriate experiences to address the questions being sought were selected (Fletcher & Sarkar, 2012). After preliminary theory was built, theoretical sampling served to move the theory forward and fill in the gaps. The participants were a diverse group of rowers, comprised of four men and eight women, who varied in age from 23 years to 72 years and had varying degrees of rowing experience (two years to fifty years). The two interviews lasted between sixty and ninety minutes, and were driven by a semi-structured interview guide developed using related research (Galli & Vealy, 2008; Galli & Reel, 2012; Fletcher & Sarkar, 2012; Morgan, Fletcher & Sarkar, 2013). The interview guide can be viewed in the appendix. Sixty single-spaced pages of interview transcripts were generated, coded, and analyzed in accordance with a grounded theory design as defined by Charmaz (2006). In the interviews, each participant was asked to recall specific instances where they experienced adversity in rowing, thereby describing their perceptions of adversity and resilience. Participants recalled how they worked through the challenges, as well as factors that helped or hindered them in their experience. They subsequently responded to a series of questions about relationships, feelings, emotions, coping mechanisms, and resiliency strategies they employed in the situations they discussed. The stories recalled by participants unfolded organically and generally followed a sequential series of events leading up to and following the adversity.

Data Analysis Procedure

Following collection of the data, the interviews were transcribed by the researcher into separate, password protected, word documents. After the interviews were transcribed, and re-read a few times for the researcher to develop a general understanding, they went through two rounds of coding. The first round of coding, termed "open-coding" (Charmaz, 2006), was concerned specifically with describing the phenomena that were occurring. The second round of coding, termed "focused coding" sought to conceptualize the phenomenon (Weed, 2009). The technique that the researcher used during the open coding is called "process coding" (Charmaz, 2006). Process-coding means that all of the codes are in active form (i.e. gerunds), and maintain the sensation of action in the codes. Table 2 demonstrates an example of process coding and focused coding. Charmaz (2006) describes coding for process as important because it makes coding iterative, whereas coding for topics would dispose for a more static interpretive experience.

Excerpt	Process	Focused
Despair goes through my mind, self doubt, what am I doing? Why am I here? This is stupid! Is this worth it? How I deal with it really depends on where I am at and what my goal is. When I am training for the Charles, I think, I am in pain now, but when I get through it, then it will be better. Goals are very useful for that sort of thing, that's the thing, when you are out in a boat and it's terrible you are like, why am I out here? And there is nothing in your mind to hang on to. Being on the competitive team there is always something or they at least try to make there always be something. They say, we are doing this workout to prepare you for the regatta. The very best coaches and coxswains will say things to instill that. Break it down into these next ten strokes are for this goal. That helps with short-term goals to get you through the next ten strokes.	Feeling despair & doubt Questioning motivation Evaluating goals Thinking about future when in pain Using goals to get through on bad day Hanging on to something Hanging on to goals Using goals to motivate Instilling motivation Breaking down practice into smaller parts Setting short term goals to reach long term goals	Experiencing negative thoughts Using goals as motivation Creating motivation Relating short and long term goals

Table 2: Example Excerpt of Process and Focused Coding

Weed (2009) posits that the most important part of the analysis process is being able to move from the first stage coding to the second stage coding while staying close to the data and not making large conceptual leaps. The component of grounded theory that allows this movement from stage one to stage two is called memoing (Charmaz, 2006; Strauss and Corbin, 1990; Glaser, 1992). Memos are essentially the researcher's way to explore the data on paper. They are ways in which the research takes the descriptions of

the data developed in the first stage of coding and turns them into concepts. Charmaz and Bryant (2007) eloquently encapsulated the essence of memo writing by conceptualizing memos as the researchers "conversations" with him or herself about the nature of the data they are investigating:

> Memos are the analytical locations where researchers are most fully present where they find their own voices, and where they give themselves permission to formulate ideas, to play with them, to reconfigure them, to expand them, to explore them, and ultimately to distill them for publication and participation in conversation with others. (p.245)

In the present study fifty memos were composed over the course of data analysis. They ranged between just a few sentences to over five pages. The memos were vital in the process of making connections within and between participant's experiences. The following except is an example of a memo centered on the question, "What is being resilient?" This memo explores that question through some theorizing, but also by posing other questions to be explored. It is in those other questions that connections are made:

> I conceptualize resilience as a process, which starts at fostering protective mechanisms, and it never really ends. Resilience works as a feedback loop, always informing the place before it. Resilience never ends because no one ever can say, I am never going to experience adversity again. But what does it mean to be resilient? Can someone be more resilient than someone else? Can someone handle a situation in a more resilient way than they handled a previous or future situation? Not everyone that was interviewed was at the same place in the process of resilience, some were still cultivating protective mechanisms, other recently experienced adversity and some were through experiencing the initial adversity and reflecting on the process and the outcome during the interview; thereby engaging in the feedback loop which informs every part of the process. How do we categorize how resilient someone is requires you to look at every part of the process and measure it in some way. So how useful and effective are the protective measures one has taken, how well did they employ them? Are the resilient processes maladaptive, adaptive, sustainable, or unsustainable? Do the outcomes leave the person better off, the same, or worse than they were originally? These are all integral parts of measuring resilience, the strength of protective mechanisms influences the strength of resilient processes and the RP's influence the outcome, and the outcome influences the feedback.

The process of memoing helped develop the concepts. Once the concepts were developed, the constant comparative method became relevant to continue to push the theory forward. The constant comparative method was employed by first comparing between and within data, then comparing data and codes, codes and concepts, and lastly between concepts and literature (Charmaz, 2006; Weed, 2009). Each piece of the data was followed all the way up the analytical chain to keep the resulting theory grounded in the original data, and not allowing resulting theory to be influenced by either researcher biases or extant literature. Primarily building theory through "abduction," an interplay between induction and deduction (Weed, 2009), this methodology works not only to build from the bottom-up, but also through the top down. The goal was to have a theory that could, at any point, be tracked through the layers of analysis down to the data. The term "comparing" refers to looking for consistency and quality in the analysis of the data, checking assumptions and developing a sense of accountability for the interpretation. As the process progressed, new iterations of the theory were compared against all parts of the analysis process to insure they were continually grounded in the data. Weed (2009) suggests that the end product of grounded theory research is a theory grounded in a substantive area. This means that the theory is not widely generalizable, rather it focuses on a specific area, such as communication in patient care, avenues of professional education, or resilience in rowing (cf. Glaser et al. 1967). Another quality of substantive theory is that although it is not generalizable, it is transferable to other contexts. For example, the connections and relationships identified in this grounded theory of resilience in rowing may be transferred as a structure for understanding how resilience works in

other performance related environments such as commission based careers or for students finding jobs in a highly competitive job market (Glaser, 2004).

Delimitations

Delimitations encompass the questions that were not addressed in this study, the literature that were not considered, the populations that were intentionally left out, and the methodologies that were not used (Creswell, 2013). There are several questions that could have been addressed but were intentionally not considered. First, the question of interventions strategies for non-elite athletes was not addressed because this particular study was the first in the area of non-elite athletes and therefore had the sole purpose of describing and explaining psychological resilience in this population of rowers. Follow-up studies could use the product of this research as a theoretical framework for building an intervention strategy for fostering resilience in non-elite rowers. Such intervention strategies exist in the literature (Schinke, Peterson & Couture, 2004; Schinke & Jerome, 2002), however, those were grounded in pre-established theories such as Schinke and Peterson's (2002b, 2002c) five-step intervention for disputing negative thoughts.

Another question that was deliberately overlooked was: Were certain individuals more resilient than other individuals? This question was intentionally not prioritized because resilience cannot be measured. It is true that certain traits that predispose individuals to more resilient outcomes can be measured, but resilience in itself is an ever-evolving concept that has no objective way to be measured. The exploration and development of a tool to measure resilience would require a way of measuring a wide range of protective mechanisms, risk factors, and positive adaptation that was well

beyond the scope of the intended study (Sarkar & Fletcher, 2013); therefore, the question was overlooked to leave room for extension.

Next, literature concerning other populations' with regard to resilience was not considered because of the very specific substantive area that was being explored. The purpose of the literature review was to provide a general understanding, followed by a more specific honing in on resilience in sport. The breadth of the literature presented was done so intentionally as it was not meant to be an exhaustive resource for all research in resilience, rather, it was meant to provide a base for a general understanding of the concept being researched, followed by a framework for comparison with elite models.

Next, the population of interest (non-elite rowers) were chosen because of the of the convenience and accessibility of the sample. Other populations that could have been chosen were "intramural" or "club" sports in the university context, adult competitive leagues around the city, or area high school competitive teams. All would have been good options, however, none were as convenience or accessible for the researcher. The primary researcher already had a report with the city rowing club and therefore could gain access to recruiting participants with ease.

It could be argued that perhaps a case study approach, or a phenomenological approach, could address the questions posed by the current study. Charmaz (2006) speaks of letting the research question mold the methodology that the researcher chooses. The nature of resilience lends itself well to grounded theory as it has been considered a process. Creswell (2013) details one of the defining characteristics of grounded theory is that if focuses on a process or action and develops a theory of that process or action. Also Weed (2009) explains that grounded theory should be considered when there is no

existing literature in the area, creating a knowledge gap. Phenomenology would fit the research questions, however, some challenges that may have been incurred with this methodology is that it would be hard to identify the phenomena in question, because participants will have experienced resilience quite differently. For example, if we were asking the question, what is the experience of resilience in rowers who sustained traumatic spinal injury? Then the phenomena would be more narrowly defined and therefore would lend itself more to phenomenology. The challenges that would have been faced with a case study design would have been defining the bounds of the case (Creswell, 2013). A case can range from very broad, such as experiences of injury and resilience at a non-elite rowing club during the summer of 2013, to very narrow, a certain rowers process of injury and recovery. This would not inherently fit the research question because it would be challenging to compare one case to existing models that had sample sizes of over 1500 athletes.

Anticipated Ethical Issues

The risks for this study were minimal and posed no greater than those found in everyday life. An anticipated risk was that participants were asked to recall adverse events in their life and describe the situations in a very detailed manner. We anticipate that some participants may become uncomfortable when recalling such events. In order to minimize risk we continually stressed that participants were not required to discuss topics that made them uncomfortable and could withdraw from the study at any point with absolutely no consequences. An unanticipated ethical issue surrounded anonymity of participant identity. Because participants were recruited from a relatively small rowing

club (~400 members), and because the interviews were held in a cafe at the boathouse, it is possible that other members became aware of who was participating in the study through witnessing participants speaking with the primary researcher, or through speaking with each other about doing the interview. It was made clear to participants that although pseudonyms would be used, their interviews would be directly quoted and used in the report of findings.

Trustworthiness

Glaser and Strauss (1967) described the measures used to assess the quality of grounded theory studies as fit, work, relevance, and modifiability. *Fit* refers to how closely the concepts and theories fit the data (Weed, 2009). In the current study fit was made certain using the constant comparative method, which ensured the resulting concepts and theories were grounded in the data. Therefore, a good fit of the theory to the data was established. A central tenant of grounded theory is that the emergence of conceptual codes comes directly from the data and not from preconceived codes from extant theory (Glaser & Strauss, 1967). *Work* refers to the theory offering methodical explanations to the problems being addressed (Weed, 2009). For example, does the resulting theory help understand how a process occurs or offer some kind of explanation for those processes? *Work* was established in the current study through bi-weekly meetings with the primary researchers thesis advisor, wherein new concepts would be discussed, theory would be critically analyzed, and material would be added and subtracted. *Relevance* refers to the degree to which a theory focuses on a core concern that has real implications for a substantive area (Weed, 2009; Glaser & Strauss, 1967).

Relevance, therefore, has to do more with the situating of the research questions in the context. The research questions that were asked in this study have applicability in many contexts, but in sport especially. Sarkar and Fletcher (2013) argued that on top of the inherent stressors experienced by competitive athletes, such as leadership and personal issues, cultural and team issues, logistical and environmental issues, and performance and personal issues (Arnold and Fletcher, 2012), athletes also face ongoing daily stressors and everyday hassles, which should be included in assessments of resilience (Fletcher and Sarkar, 2013). Competitive athletes face multiple stressors and the relevance of this study is high because it is specifically looking at how athletes deal with those stressors. Lastly, *modifiability* refers to the study's ability to be extended and developed further as new data emerge (Glaser & Strauss, 1967). The current study is a living, working document, that has plenty of room to grow and develop into a more complete understanding of the process of resilience in not only club level rowers, but also other non-elite athletes.

Expected Outcomes

Based on the work of Masten (2001), and the relative consistency in non-sporting models of resilience (Richardson, 1990; Kumpfer, 1999; Lepore & Revenson, 2006) it was anticipated that the resulting substantive grounded theory of resilience in non-elite rowers would mirror many of the concepts, categories, themes, and connections identified in models of resilience in elite sport. Masten (2001) posited that,

> Resilience appears to be a common phenomenon arising from ordinary adaptive processes… This does not mean in specific instances, extraordinary talents or parenting or good fortune may not play a key role for an individuals positive development or recovery; rather, the data suggests that normative processes

> account for much of the resilience observed across a wide variety of situations. (p.234)

Taking this idea into account, it was expected that although the underlying processes in both elite and non-elite models would be the same, the degree to which adaptation has taken place will vary. Those elite athletes who are put in high-pressure situations were not all of the sudden dropped into that situation. Over the years of training and competing, a high level of adaptation to challenges in that context has occurred using the same underlying processes used by non-elite athletes. Therefore, perhaps each process could be viewed on a spectrum of competency. It is also expected that the theory this research produces will not provide an exhaustive understanding of every facet involved in resilience in the non-elite rowing context. It is expected that this research will serve as a starting point for comparison on elite and non-elite models of resilience.

Results

Interviews of twelve rowers at a local rowing club provided the basis for this exploration into the experiences of adversity and resilience in club-level competitive rowers. The participants were a diverse group, comprised of men and women, who varied in age from 23 years to 72 years and had varying degrees of rowing experience. The interviews lasted between sixty and ninety minutes, and were driven by a semi-structured interview guide developed using related research (Galli & Vealy, 2008; Galli & Reel, 2012; Fletcher & Sarkar, 2013; Morgan, Fletcher & Sarkar, 2013). Sixty single-spaced pages of interview transcripts were generated, coded, and analyzed in accordance with a grounded theory design as defined by Charmaz (2006). Each participant was asked to recall specific instances where they experienced adversity in rowing, thereby describing their perceptions of adversity and resilience. Participants recalled how they worked through the challenges, as well as factors that helped or hindered them in their experience. They subsequently responded to a series of questions about relationships, feelings, emotions, coping mechanisms, and resiliency strategies they employed in the situations they discussed. The stories recalled by participants unfolded organically and generally followed a sequential series of events leading up to and following the adversity. The presentation of results will follow a similar logical structure; first flowing from what participants experienced as adversity, to how said adversity affected them, to how they attempted to deal with the adversity, and finally to the learning that took place as a result of the experience. Although resilience has been conceptualized as a process, trait, or

outcome, the presentation of the results will cast no such light on the concept. Rather, the results will be set forth in an objective fashion and thereby will remain consistent with the inductive nature of the research design. In considering patterns and themes in the data, it was critical to understand the differing perceptions of adversity, and how these could affect one's experience of resilience.

What is Adversity in Rowing?

Resilience does not begin with coping strategies and ways of getting through a tough time; it does not begin with friends and family supporting you after a set-back. Resilience begins long before the adversity was ever experienced and continues long after it ends. Nonetheless, for the purpose of this analysis, the adversity will be the starting point of analysis, even though the adversity is only one stop along the way toward resilience. In order to better understand this journey of resilience the questions of how and why people view adversity in the way they do were considered. In this section, situations participants viewed as adverse are explored, and are given structure and meaning.

Perceiving Adversity

The Merriam-Webster dictionary defines perception as: the way you think about or understand someone or something. While this definition is adequate it leaves out an important element in the discussion of perception: variation. The present findings indicated that, for rowers, perception is not a constant, and may be influenced by multiple elements. There emerged a number of patterns in the data that suggested there were specific factors that contributed to differing perceptions of adversity. It may be helpful, in

understanding the idea of differing perceptions, to think about everyone looking at the world through different lenses. One person may have a blue lens, another a green, and a third person a red; all will see a version of the world, but it will be colored differently. The nature of a rowing club is such that it is made up of a diverse cross section of people possessing a wide variety of experiences. Based on the author's observation, club rowers are generally a more diverse group than elite rowers and so many will have differing perceptual lenses. Therefore, the resulting theory may inform discussion on a wider range of rowers than previous theories.

The foremost pattern that arose was that with time and age came differing perspective on adversity in rowing. For example, all participants were posed the question, "what rowing accomplishment are you most proud of?" While both older and younger participants discussed instances where they won a race, or succeeded at something they had previously been unsuccessful at, only older participants factored in their age when discussing assessments of pride. Participant ten, let's call her Mary, who is an older rower, discussed the feeling of winning:

> Pride, accomplishment, that you worked so hard to get there and then you got there, that sense of accomplishment for me at my age, that I have gotten to this point that I am doing it, that just makes me feel really good. I am proud of myself for that.

When considering pride, she immediately took her age into account. Later in the interview, Mary identified adversity as being an older rower who was trying to keep up with younger rowers on the team. She was initially frightened by this prospect because she was, in some instances, forty years older than some rowers on the team. She defined adversity with respect to her age, not how hard she wanted to work or how committed she

was. Over time, and with help from others, Mary began to realize that age had nothing to do with how much she wanted to win and how devoted she was to her team, but sometimes she would use age as an excuse, until she realized she could still do her best and be proud of herself for that. Mary recalled an occasion during practice when she commented that she was too old to keep up and a teammate quickly responded: "Age doesn't matter! It doesn't make a difference how old you are, just pull hard!" Since then, Mary's perception of age shifted, and she began to consider her pride aside from how old she was. This situation demonstrates a common theme that emerged in older rowers who were still trying to train with younger rowers, that is, they defined adversity through the lens of age.

The next pattern that surfaced was that older female participants more frequently described instances of sexism, and their experiences of adversity may be influenced by such biases. For example, each participant was asked, "what sports did you play when you were growing up." The male and younger female participants described a variety of sports they played as children and teenagers. Older females, however, described how when they were growing up they were discouraged from playing sports, and were told not to keep up with the boys. Participant one, Anna, described how she understood athletics while growing up:

> I am another generation, we were told not to run with the boys, we were discouraged from being wild, hanging upside down on the jungle gym, when girls got a little older they were discouraged from doing anything physical. I had no sports background until I began rowing when I was 39.

Another older female participant, Mary, also described how she had limited access to sports growing up in California, "Sport… I have never been involved in, we didn't do

that when I was growing up, it wasn't available to me…at that time it was all about my brothers, not me, this is first time I have been involved in anything competitive really."

All too often women are treated differently than men because of their sex, and women in athletics are not an exception. Only recently did female athletes begin to win equal amounts of award money in competitions such as The Australian Open. In fact, up until 2014, women's ski jumping was not allowed in the winter Olympics due to concern for their safety. These gender biases can impact the way female athletes view sport and the access they have to resources. As both Mary and Anne mentioned, because they did not begin competing until later in life, they began to have new experiences and started to figure things out about themselves that they had not known previously. Mary explained that she never knew she could push herself as hard as she did in rowing. Similarly, Anne explained that she never realized how strong she was and how effectual she could be until she became a rower:

> I love being strong… before that I was tall and thin, but I like having muscles and being able to lift weights, it's a very knew experience, and it's sad that I had to wait until I was 39 to do that… it's different for this generation because they are more encouraged.

Female stereotypes and socialization practices were limiting factors for these women earlier in their lives with respect to sport and therefore may have shaped their perception of adversity now.

A third pattern that arose was level of experience in rowing. With more or less experience in rowing came differing perspectives and relationships. Participant 14, Eva, expressed frustration in her inability to "break through" to higher levels of rowing at her

club. Over the past few years, she felt like those who had rowed in college viewed her as "less than" because of her relative inexperience with rowing. Eva expanded on this idea:

> Over the past four years I have been trying to work up to a higher level and there are certain people that conflict with me and I blame it on not being a college rower. I can't understand what it was like to row in college, but just because I can't relate doesn't mean I don't want to work as hard as other masters rowers.

Eva felt that her lack of experience was a limiting factor, and therefore defined the relationships with those who doubted her abilities as a form of adversity. Tense relationships defined as adversity will be discussed more later, however, it is pertinent to understand how differing amounts of experience can shape one's perception. Another example of experience shaping perception comes from the other end of the spectrum. Participant 16, Charles, has been rowing for over fifty years. During his sophomore year in high school he broke his wrist. At the time the injury seemed very serious, and caused Charles to feel like he would never row again. It was only after years of rowing experience that he realized that an athlete must face adversity with long-term goals in mind instead of short-term solutions:

> When you are that young you don't have any sense of perspective or distance, so that was traumatic…a couple of times when I got injured in the future I was worried about coming back from the injury and I realized you have to look at it in the long term, if you worry about trying to recovery immediately, the odds are that you are going to exacerbate the situation rather than improve it… you have to allow yourself the wisdom of perspective and distance. The broken wrist my junior year may have really helped my subsequent career.

Charles used his experience in high school to understand other situations experienced later in life. A rower who did not have similar experiences with rowing may have a harder time understanding injury recovery. While Charles understood how to set long term performance goals, others, who may not have encountered such situations, may only

search for temporary solutions to their problems instead of looking for the long-term resolution. Charles' story demonstrates how perception and perspective of adversity based on previous experience may influence the participants' ability to be resilient.

The last pattern that appeared was that changes in perception seemed to mirror the amount of time since the adversity was experienced. That is, as time passed, participants seemed to be more reflective about the situation and saw more of the benefits of adversity and less of the downsides. Participant fifteen, Lisa, agreed to be interviewed two weeks after she had a serious injury during a race. Participant two, Meghan, spoke with the researcher nearly two years after her injury. Both were very similar in that their injuries made them have to stop rowing for a period of about three months; however, they were both at very different points in their journey to resilience. While Meghan had fully recovered, forgiven the coach she originally resented, and had commenced rowing again; Lisa, in the midst of coping, was still in a great deal of pain and was not allowed to row or do any other physical activity. While Meghan had a sufficient amount of time to process the pain and the anger, Lisa was not there yet and was still in an accusatory mindset, " I am upset and she knows it, I'm pissed… I fractured my rib, I have a bruised liver…there is no way that should have happened."

At the time of the first interview it seemed as if Lisa was still in the period of anger and blame. She was distancing herself from the situation and this altered her perception of the adversity. Meghan was able to remove herself from her situation and look at it more objectively. The distance from the incident allowed her to reflect on her emotional state at the time and make some concessions about where the fault laid:

> I wrote her a letter [to my coach], and I just had to get things off my chest. The response was really great. Now if we ever come face-to-face in a rowing function that we are at, I think it would be good. At the time [of the injury] I wasn't mature enough to understand what her coaching style was.

Over time Meghan realized that a combination of her coach's style, and her stubbornness, led to her injury. Lisa was not to that point yet and she admitted this fact. Participants were asked the question, "what have you learned from this experience? Lisa responded, "I don't think I can answer that question right now; there has not been enough time since the injury. I am still in the anger and resistance phase; acceptance is the next step."

Changes in perception became a theme in the recollections and stories told by the participants. This section was meant to elucidate the idea that rowers may understand and approach adversity differently based on their differing perceptions. These same concepts will be discussed more in upcoming sections. For example, distance from the situation acts both as an influence on perception and as a strategy toward a resilient outcome, as we saw in Meghan's case. This idea mainly stems from the social constructivist ideology of the author. Elements of perceptions will be woven into the following analyses and theory. This section was merely an introduction to this ever-important concept.

Categorizing Adversity

For the purpose of this study, there emerged a difference between how adversity was described, and what adversity was described as. The former deals more with a more abstract categorization of the construct, and the latter refers to specific identification of adverse events experienced in rowing. The purpose of this section is to explicate the relationships between different categorizations of adversity, and begin to understand how

the differences in experiences arise. The following section, "Experiencing Adversity," will delve further into specific instances of adversity.

Adversity was characterized in a number of different ways (injury/illness, relationships, thoughts/emotions/feelings), which will be discussed in the next section. To appreciate different kinds of adversity, it is key to consider the ways adversity can be categorized. The ways participants categorized adversity can be understood along two dimensions. The first dimension concerns the relative duration of the adversity and can be interpreted as a spectrum. At one end of the spectrum is *acute* and often times more intense adversities, which may have a relatively short duration. On the other end of the spectrum there are chronic adversities, which may be less intense, but may last longer. The second dimension, which was alluded to in the description of the first, is the intensity of the adversity. Adversities that are challenges, but allow the participant to continue functioning without long-term issue, can be considered to be minor adversities, as opposed to major adversities, which take a long-term toll, and may require a major adaptation or change to overcome. When speaking with participants, most did not necessarily define the adversity in one of these four categories; however, it was clear through the language used to describe the adversity that it would fall into one of these categories. For example, there were instances when the adversity clearly had a very serious effect on a participant's life, such as the death of a family member, a divorce, a serious illness, or possibly a relationship that severely constrained a participant's ability to continue rowing in the way that they wanted to. These situations were defined as major, in the dimension of either acute or chronic. Participants did not say, " this was a major adversity that stuck with me for a while," rather this understanding was discerned

from discussing the experiences in depth and developing an awareness for different classes of adversity.

Acute Adversity. Acute adversity was the more common form of adversity and can be defined in terms of frequency and effect. Frequency refers to the number of times or how much the adversity has occurred. For example, if a participant experienced an illness, such as pneumonia, that occurred once or in isolated occurrences, then it would be considered an acute adversity. On the other hand, if the adversity occurred repeatedly or was connected, it would be considered chronic. The other criterion, in this context, is the effect of the adversity. Effect refers to the impact the adversity had on the participant's ability to continue rowing through the experience. For example, if a participant was in a car accident, and they had to stop rowing for a long period of time, it would be considered an acute adversity. However, if there were long-term effects of the car accident with regards to rowing, like physical limitations that required continued management, then those would be considered chronic. An example of acute adversity from the data was Meghan's experience of her back injury. The frequency was isolated, and the effect was that she had to stop rowing for a long period of time. Meghan's adversity is considered an example of an acute adversity.

Chronic Adversity. Chronic adversity was not as common as acute adversity, but certainly developed as a pattern in the descriptions the participants provided. Chronic adversity can be defined in the same terms as acute adversity: frequency and effect. In terms of frequency, adversity that re-occurs or requires long term maintenance and

management is considered chronic adversity. For example, if a rower was experiencing heart problems and had to have a pacemaker put in place, then this would be a chronic adversity because it would require the rower to monitor his or her condition over the long term. Another good example of a chronic adversity would be a rower with diabetes. Diabetes would be something that may require long-term maintenance, and may be considered an adversity for the rower over a long period of time. When considering the "effect" criteria, chronic adversity does not always have to lead to the cessation of training for a long period of time. In some instances, a negative relationship with another teammate or coach may be considered a chronic adversity, but would likely not require the person to stop rowing.

Major Adversity. Major adversity is seated at the high end of the intensity spectrum. This type of adversity is mainly defined in terms of domain. Domain refers to the different domains of a person's life. Many participants described the three domains of their life as work, life, and sport. Work is understood as a participant's job or career; life is understood as a participant's at-home time; and, sport refers to a participant's recreational activities, which in this context, is rowing. Certain adversities impact all three of those domains, and such instances would be categorized as a major adversity. For example, when Anna was diagnosed with a rare form of cancer, it not only was challenging for her rowing, but she also had to make accommodations during work, and during her time at home. In other words, challenges that are actually life adversities, which also affect rowing, are considered major adversities. Major adversities were described as taking longer to recover from, and could be appropriately characterized as

major events in peoples' lives. Other forms of adversity that only affected one or two domains of participants' lives were aptly named "minor adversities." This name is not to underplay the seriousness of the adversity, rather, just to signify the portions of participants' lives that were impacted.

Minor Adversity. On the opposite end of the intensity spectrum lies minor adversity. This type of adversity, as previously described, encompasses adversities that have limited reach into other domains of participants' lives. For example, many times participants' described circumstances where a relationship with a coach or another rower had been particularly challenging for them. While these relationships were creating tension during practice or around the boathouse, they were still limited to that domain of a rowers' life. However, if the two rowers also worked at the same company, or happened to be married, then it would transition from a minor adversity to a major adversity, because the adversity would then affect all domains of their lives. Although the line between major and minor is relatively clear-cut, there are some hazy exceptions. For example, Participant 13, Dale, described how the relationship with his wife was experiencing some strain because they were both rowing at the same boathouse. This was hard for Dale because it not only affected his life while rowing, but also carried over into his at-home life. While this, by the structure described, would be considered a minor adversity, there are likely elements of the described adversity that carry over into his third domain of life: work. Similarly, between both dimensions of intensity and duration, there are exceptions that do not cleanly fit into the structure explained. These instances were assessed on a case-by-case basis and were understood as negative cases.

Dimension of Adversity	*Acute*	*Chronic*
Major	- Effect: Stop rowing for long period of time - Domain: Affected all domains of life - Frequency: Occurred once or on isolated occasions	- Effect: Not required to stop rowing for a long period of time - Domain: Affected all domains of life - Frequency: Re-occurred and/or required long term maintenance
Minor	- Effect: Stop rowing for a long period of time - Domain: Did not affect all domains of life -Frequency: Occurred once or on isolated occasions	- Effect: Not required to stop rowing for a long period of time - Domain: Did not affect all domains of life - Frequency: Re-occurred and/or required long term maintenance

Table 3: Defining the Dimensions of Adversity in the Present Model

Spectrum of Control. The distinction between dimensions of adversity not only sits in the differences attributed to duration and intensity, but also in the level of control each dimension allows the rower to have. Choice in situations of adversity was a common pattern in participants who felt like they had control over their challenge. A feeling of control, in many cases, brought ease and even confidence to those facing difficult circumstances. For example, Lisa brought structure to her situation by equating her experience to those outlined in a model of problem solving that she learned about it school. By manipulating her situation with structure she was trying to bring control back into her hands. William gained control over diabetes by educating himself about diabetes treatment and management, effectively limiting the effect the illness had on his life. Lisa

and William both found forms of control when dealing with their adversities, however, both experienced it differently because of where their situations landed on the dimensions of duration and intensity. While William's was a long-term *chronic* illness that had *major* implications for his life, he was able to limit the effects by gaining control early in the course of the disease. Lisa, on the other hand, experienced a *major acute* adversity and had to go through a few stages before she arrived at a place of control. This third dimension of control is interwoven in the framework of duration and intensity. Adversities that fall closer to the *minor chronic* adversities tend to have more opportunities for control, whereas those that fall closer to *major acute* may have less opportunities for control. *Figure 4* presents a visual representation of the spectrums and relationships between duration, intensity, and control.

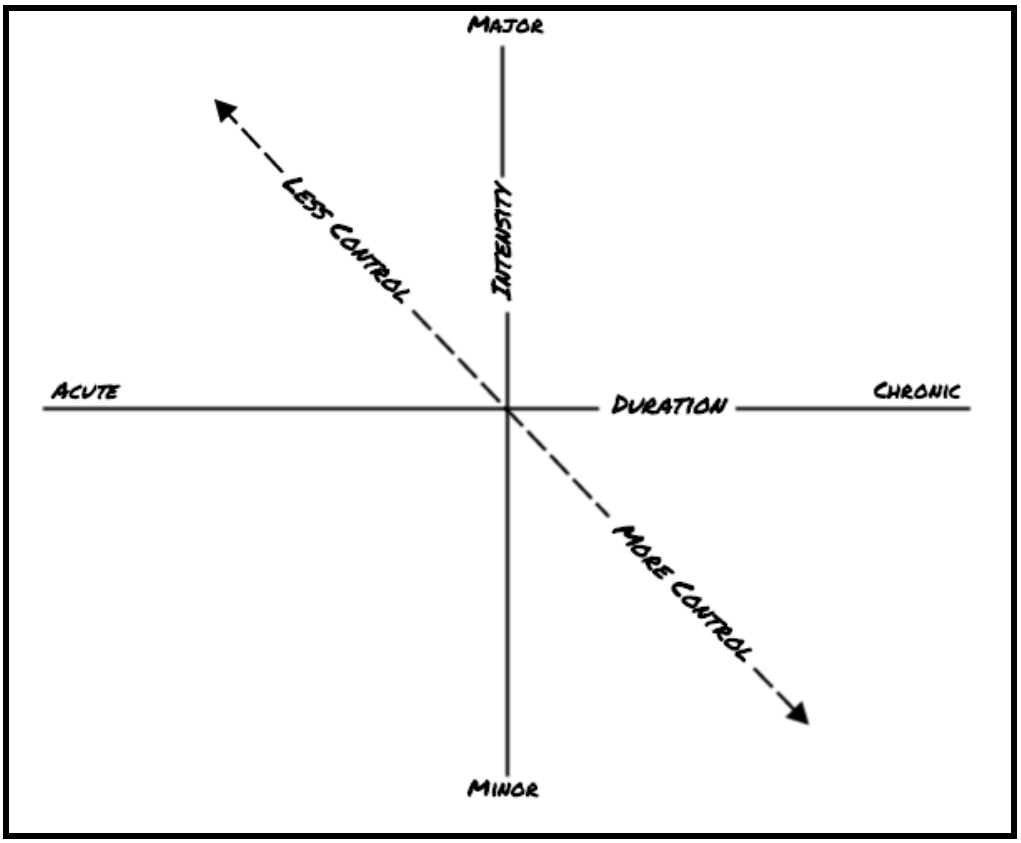

Figure 4: Spectrums and Relationships in Intensity, Duration, and Control in Adversity

Experiencing Adversity

During interviews, adversity was described as anything that is viewed as a difficulty, challenge, setback or hardship in rowing. In some situations, in order to prompt participants, generic examples of adversity were provided such as tense relationships with teammates or coaches, illness/injury, or one's own thoughts and emotions. Participants recalled a wide range of situations that they defined as adverse. In this section those experiences, and the affect they had on the participant, will be

presented. Effects included emotions and feelings experienced immediately, during, and following the situation. Three major themes emerged in participants' recollections of adversity.

First, all participants recalled an instance of injury or illness as a form of adversity in their athletic career. Although injury and illness were at points dealt with differently, for the purpose of thematic categorization, they are presented together. Injury and illness are the most clear cut forms of adversity experienced, but also provide a distinct challenges for athletes because, unlike some other forms identified, they have a high potential to affect a participant's life outside of rowing as well as within. Second, many participants identified interpersonal relationships as a form of adversity. Rowing is a unique sport in that it requires all of the athletes to be in close proximity and in complete synchrony, both mentally and physically. Relations often grow tense between rowers and other rowers, rowers and coxswain (the person who steers the boat), and rowers and coaches. This tension in turn will become a challenge for the parties involved. Lastly, some participants described instances where their own thoughts, emotions, or feelings were constraints or setbacks in their rowing. For instance, if a rower's confidence is low then they may not be performing to the best of their ability because of this feeling. Oftentimes feelings, like low confidence, were influenced by external factors, which may not even be related to the sport itself, so were not actually the root of the low performance, nevertheless, participants would identify the feeling, such as low confidence, as the adversity, not the root cause.

Injury/Illness. The most common form of adversity described was injury and illness. Every participant recalled situations where they had been injured and either had to stop rowing for a period of time or had to continue rowing through the pain. There were a number of emotions and feelings that accompanied injury or illness. One of the most common emotions was anger. Meghan experienced a traumatic back injury during a practice. Although she was told by doctors that she had to stop rowing and rehabilitate her back. She ignored their warnings and continued to row for the next eight months. Later Meghan would realize she was mainly fueled by an eagerness to seek approval, "I waited eight months until I had surgery… and I spent everyday thinking I had to get well… I was just trying to get the coach to notice me, accept me, realize that I was damn good, I just wanted some kind of affirmation from her."

Meghan admitted that although the back injury was the physical manifestation of the adversity, she identified the biggest adversity as her relationship with her coach, which will be discussed in the *Relationships* section. After eight months Meghan was wheelchair ridden, and had to receive a shot in her back every week. Doctors told her that she was seriously damaging the nerves in her back by continuing to row and did not have a choice; she would need to get surgery or have permanent damage. After she received surgery, the part of her that was seeking validation and approval diminished and was replaced by anger and blame, "I was looking for affirmation and when I didn't get it I was like screw this, and I began to hate everybody, I hated my teammates, my friends, my school, my coach I pushed everyone away."

She described this anger as stemming from the feeling that no one really cared about how she was doing, and the progress she was making. She was upset that her coach never checked in on her, and never even asked how her back was feeling. Eventually she began to blame her coach for the injury, and targeted people around her as the outlet for her emotions. The anger and blame in this situation was a way for Meghan to distance herself, and her identity, from the situation. All the anger and blame was external and did not reflect on her as a rower. All of her blame was outer directed and reflected on her coach, her friends, and her teammates, "I was mad…hurt, really sad all the time, but I brought this on myself…the lack of friend, the loneliness, I pushed everyone way because I hated them. But when I got better people started approaching me more because I didn't put up this wall."

Meghan's situation demonstrates how experiences of adversity may move in stages. At first she was eager to get better and please her coach, but upon not receiving that positive feedback, and being forced to have surgery, she became angry and started placing blame on those around her. In this instance the anger and blame acted as mechanisms to create distance between her identity and the situation, thereby allowing her to keep her identity intact. As we move through the rest of the analysis, the idea of identity is also a re-occurring theme, which is critical in other parts of this resiliency theory.

Lisa had a similar experience to Meghan. Lisa and Meghan's experiences of adversity were similar in the fact that both of them expressed emotions of anger and blame. However, they were different in that Meghan identified the relationship with her coach as the adversity, while Lisa defined the injury as the adversity. Lisa's experience

was also unique because she was interviewed two weeks after her accident, and was in the midst of dealing with the adversity. All of the emotions were extremely raw, and during the interview it was the first time Lisa had been to the boathouse since the incident at the race. Two weeks prior to the interview, the team was racing at an away regatta. Lisa and her partner where beginning a race when Lisa got injured. The immediate emotions that Lisa felt were centered on finishing the race, "I knew I hurt something, but I didn't want to stop and let her down. It wasn't even an option to stop, we had been working all year, and I wanted a god darn medal"

She described these emotions as stemming from her competitive nature, and originated from an instinctual urge to finish the race, perhaps without rational thought. During the latter stages of the race, the reality set in that Lisa had broken something and needed medical attention quickly. Lisa was then fearful, uncertain, but above all, still wanted to continue the race:

> I realized my rib was really starting to hurt, and my breathing was getting very shallow, I told my partner that I was not doing so well. She asked if we needed to stop, I responded, are you kidding me? We are not stopping! That's not what I wanted to hear, I wanted her to say, we are almost there, I needed that encouragement from her, and I got pissed when she said we could stop.

It was very difficult for Lisa to continue the race because of the pain she was feeling, however, in the moment, the pain and the emotions surrounding the interactions with her partner during the race actually motivated her to work harder. At that point, Lisa had felt a whirlwind of emotions including anger, uncertainty, fear, and a visceral determination to continue, and this was only ten minutes after the initial injury had occurred.

After finishing the race, Lisa's breathing had become dangerously shallow, and

she was worried about passing out, however, her predominant feeling was embarrassment:

> In the medical tent I passed out twice, which was embarrassing…it is embarrassing and mortifying to have people take you up off the dock with everyone there staring at you, and then they put you in the medical tent and don't let you leave.

Lisa experienced embarrassment because she felt like she was on display in a very vulnerable state. As she discussed later in the interview, she has a very type-A personality where she is the decision maker and the mover in many situations, however, having little control over what was happening to her conflicted, in many ways, with her strong personality traits. Lisa's adversity clearly fits into the "acute major" quadrant.

After the initial period of shock and dealing with the more pertinent things such as her immediate health, Lisa began to feel this anger and blame toward her partner, "I was very angry with her and I was very vocal about it." Lisa expressed very similar emotions as Meghan in the fact that she isolated herself, did not want to go to the boathouse, and did not speak to her partner, or anyone else, for a few weeks after the accident:

> It's kind of really an alienating feeling… I miss being at the boathouse, I want to go on the water, I want to row those new boats, this was six days of my life, and it was very regimented, I can't remember how long it has been since I have sat down at home and watched live TV…usually I would be rowing. I am pretty dedicated, I have a plan, I have a goal, I am pretty focused, and being the one that can't do that right now it's like I don't have that sense of purpose anymore. I get so jealous if I overhear people talking about races, I think, oh yea, I wanted to go to that. I don't want to be that person that people feel sorry for. I am sad that I am not able to come down and partake in this because they really become your family when you are injured or can't be here you are left out of that camaraderie, there is not a sense of accomplishment.

Lisa described how not being able to be at the boathouse was hard for her because rowing was such a large part of her identity. The sport was something that took up eight hours of

her week, and she valued the experience very much. She did not want to see people when she was out with injury because she felt left out, and wanted to be there practicing with her teammates. Lisa's situation highlights how important the construct of sport becomes for some athletes, and how when that is taken away from them emotions such as anger, resentment, and sadness may follow. If the rower feels like someone or something else caused the adversity perhaps the resentment and anger will be outer directed, however, if a rower feels like they were the cause of the adversity, the resentment may be inner directed. For example, after Meghan realized she was the one putting a lot of pressure on herself, and was putting up a wall, she went through a period of self forgiveness. Lisa's situation also underlines the importance of identity in the experience of adversity. A theme that developed was that adversity could commonly be viewed as a threat to one's identity in rowing.

Lisa was also interviewed eight weeks after the first interview. At ten weeks from the incident Lisa had different perspective on the situation in the sense that her injury had healed, but the adversity was still there. Instead of viewing the adversity as pain and not being able to train, she was now struggling with the process of returning back to the team. Since she left the team had completely changed, and Lisa barely knew the people she was rowing with. The emotions that Lisa was experiencing more were much more centered on uncertainty rather than anger. She was uncertain with her team and about her relationship with the pair partner, "I've reached out to [my partner] a few times because I am starting to not be as mad at her anymore, but we don't really talk anymore, we were close, now we just talk in passing." The adversity became the feelings of uncertainty, the low confidence, and the lack of a strong place for her on the team. Lisa was uncertain about

her place on the team, about the relationship with her new teammates, and about the relationship with her coach. During the second interview, Lisa expressed a hesitation in wanting to continue rowing, and pined for the motivation and passion she had for rowing before the injury:

> I wasn't motivated at first, I don't know if it is the change in the team, the women, the camaraderie, you get to that comfort level, they are like your family, and we don't haven't developed that yet…I am really questioning my ability, I hear my coach yelling at other rowers and I find myself wondering if he is going easy on me.

In some situations, such as Meghan's and Lisa's, participants did not have a choice if they would continue rowing or not, they simply had to stop rowing. Participant seven, William, remembered a time when he was diagnosed with pneumonia a few days before training camp started in the summer and did not have a choice if he could continue rowing or not, "[When] I was diagnosed with walking pneumonia they had to take my boathouse key away from me to stop me from practicing...I probably went a little crazy not doing anything for two weeks…I was just thinking I have to get better, I have to get back in shape."

Prior to going to the doctor, William explained that he had the symptoms for the previous five months, however, neglected to go to the doctor because he knew they would make him miss racing, "I thought I would just see someone after the season, I didn't want to be told to stop, I didn't want to let my team down… [After being diagnosed] it was hard not to train for two weeks, I felt like I was letting down my summer team." William's attempt to remain in control of the situation manifested in his neglect to see a doctor. William knew that if he decided see the doctor, they may force him to take time off, which meant that he may miss training for championship races. It

was important for William to continue to train for the races because he wanted to be in peak shape. There were two options for William at this point, either take time off when he first started having symptoms, and possibly miss training before the championships, or race the championships, and then see the doctor. The former choice would allow him to recover and train at 100% in the summer, and the latter choice would require him to take time out of his summer racing. William made the decision that the spring season was more immediate and he wanted to finish it out. Looking back, William admits he should have gone to the doctor earlier:

> I could have handled it better, maybe if I had sought out the doctors earlier before the season was over, and not let it snowball how it did, but I was not going to let myself be sidelined, but it would have been good to get medicine before it got to that level.

A common theme displayed was that many times in adverse situations judgment was clouded by emotional attachment to rowing. Meghan continued her rowing season on a broken back, Lisa rowed a race with a broken rib, and William trained for five months with a form of pneumonia.

Throughout William's account of his experience rowing through pneumonia, he described feelings of uncertainty, and demonstrated a great deal of emotional attachment to his team and his sport, which may have been detrimental to his later performance. William attempted to control the situation by not allowing others to intrude. He did, however, describe a different illness that has been with him his entire life, but has never been viewed as serious adversity because he has always been in control of it. William was diagnosed with Type-1 Diabetes when he was twenty-four months old. He described diabetes as not ever being an adversity for him because of certain factors that allow him

to be in control of the disease, “Yea I have diabetes but it’s not a disease that is going to deteriorate, I have control over it, I can get through it and its something that doesn’t define me.” As William described, he feels like he has control over the disease so he has not let it define who he is as an athlete. These feelings are quite different from his experience with pneumonia for a few reasons. First, along the dimensions of intensity and duration, pneumonia was categorized by William as acute, and minor in the sense that it encompassed a relatively short duration, and did not affect more than one facet of life. Second, he was able to prepare for living with diabetes, whereas he had no such preparations for dealing with pneumonia. William explained that for ten years during his childhood he went to a summer camp for boys with diabetes. The camp was a combination of a typical summer camp and rigorous diabetes education. William attributes his ability to thrive with diabetes to things he learned and relationships he developed in this camp, “I formed great bonds… the motto of the camp was perseverance, faith, and courage, and I try to live my life by that.”

The influence of the camp on William will be discussed more in the Resiliency Strategies section, yet for the purpose of this section, the camp was important to discuss in order to juxtapose William’s experiences with pneumonia and diabetes and attribute the difference to control and identity. These two themes impacted participant’s responses to adversity.

The major emotions and feelings that were identified are outlined in *Table 2*. The most common emotions and feelings were uncertainty, frustration, denial, and discouragement. Behind each one identified there is a root. As was discussed previously, many of the emotions identified such as uncertainty, embarrassment, frustration, and

discouragement stemmed from identity formation and preservation. Participants commonly described how rowing had become a very important part of their identity, and when this aspect was removed, they had feelings of missing out which may have lead to discouragement or frustration. For instance, Lisa described feelings of embarrassment related to her experience, which stemmed from the fact that her current state was misaligned with the narrative she had about herself, in other words, the way she was functioning was incongruent with the identity she had created. This misalignment left her with a sense of purposelessness, frustration, and embarrassment. The core beliefs that many emotions and feelings stemmed from surrounded issues of identity and control.

Relationships. Relationships are made up of complex social interactions that have numerous moving parts and influencing factors. A pattern that emerged in the data was that participants viewed some relationships as challenges and others as contributors toward more resilient functioning; this section discusses the former.

Relationships as adversity refers to any time that a participant felt like the interactions with or behaviors of a teammate, coach, an overarching entity such as the board of directors, or even the club mission statement were creating a unfair, tense, stressful, or hostile training and competition environments. As was previously described in Meghan's situation, relationships can be a source of challenge in the lives of rowers and may lead to further adversity in a different form (i.e. injury). Relationships as adversity were described by most of the participants and can oftentimes be categorized as a *minor chronic* adversity. In the previous section, stressful relationships were briefly hit on when Meghan's situation was being discussed. This type adversity is more

complicated than injury/illness in a sense because there is more than one's internal stake in the situation. For example, when William was diagnosed with pneumonia a week before he started summer training, although his poor performance may have affected his teammates, the situation revolved around his internal experience with the illness. Only his emotions, feelings, behaviors, and reactions related to the illness defined the adversity. On the other hand, when participants defined a relationship as a challenge or a source of tension, more than one person is directly involved in the situation. Instead of being affected by an internal thing such as a broken bone or a virus, participants with inter-relational issues had an external source of adversity, which altered the way that they responded to it. Instead of just considering their internal experience, they also end up considering the experiences of others involved. Dale's situation exemplified the idea of a relationship becoming an adversity in rowing.

Dale is a middle-aged club level rower who has been rowing for about five years. The original reason that Dale started rowing was because he wanted to spend more time with his girlfriend, who was an athlete at this particular rowing club. During the early stages of his rowing career, Dale would get easily frustrated with his wife, Allison, for trying to coach him:

> We tried to row together when I first started…it was a complete disaster… she was so much better than I was, and she wanted to help so she gave suggestions, but after a while I just got tired of being yelled at, she thought I was ignoring her, so after a while it just turning into a screaming match.

As Dale became better at rowing, he began to surpass Allison in speed on the water. Dale described this as a hard transition for Allison because before Dale began rowing, the sport was her outlet and her achievement; now it was an activity that they did together.

Dale described how Allison acted as if there was almost a feeling of competition between them, which he was very uneasy about:

> The hardest thing for her it seemed was when I became faster than her in the single… my technique was horrible but physiologically I was just faster… she sees that as me competing with her, and I am blown away because that makes no sense to me, I am not competing with her, I do it to spend time with her.

Relationships involving heavy emotion had the potential, especially as demonstrated in Dale's case, to reach across the domains of life. Dale described how as a result of the interactions with his wife at the boathouse, there was some tension that transferred back home. His situation begins to border on *major chronic* adversity rather than minor because of these inter-domain interactions. The element that kept this categorized as a minor adversity was the fact that he did not have to stop rowing for a long period of time. Although Dale did mention that there had been a few periods of time where he considered stopping rowing because the tension it has created, "There has been a few times where I thought maybe I should stop rowing, every time I do I realize I don't want to be forced into doing that." If Dale were to stop rowing, specifically because of a continually strained relationship, this situation would more closely fit the requirements of a *major chronic* adversity because it would be crossing into more domains of life. Another participant who described particularly strained relations with another person on the team was Meghan. As discussed earlier, Meghan attributed her injury to a very stressful relationship with her coach. Meghan described the first time she met the coach as an omen for the ensuing relationship:

> The first time I met [my coach], I visited the boathouse, and unknowingly parked my car in the wrong spot. [My coach] yelled at the team and made them do a punishment workout because she didn't know it was my car, the visitor… at that point I remember calling my dad and saying I didn't know if this was the best

> move, I didn't feel good about the coach… so I went in with a preconceived notion about the coach.

The dynamic between Meghan and her coach was off because of the ideological inconsistency between the coaching style and Meghan's learning style. Their principles and values seemed to be misaligned with one another. Meghan had come from a previous rowing program in high school where her coach was very supportive and caring, to a program where Meghan felt like just another person to fill out the boat. She did not feel as if her coach valued her as a person and an athlete, just as a seat filler, "We just never really clicked from the beginning, she had very high expectations of me, and the way she treated those athletes, in which she sees a lot of potential, is to ignore them and be very hard on them." This situation highlights the importance of a fit between rowers learning style and coaches teaching style. Rowers must consider the coaching style of the coach before committing to being on their team, and coaches must understand that all rowers do not respond to the same kind of coaching techniques. Meghan particularly did not respond well to her coach's direct coaching style:

> I fractured my L4 and L5 lumbars during a testing piece, I wouldn't have broken it if my coach didn't try to change my form during the middle of the test, I can vividly remember my coach standing in front of me for a solid nine minutes, just yelling at me to change my form, so I overcompensated just to please her and that is when it happened, that's when I heard a pop…

Another example of relationships causing problems for rowers comes in a more abstract form. As presented previously, older rowers tended to view their age as a challenge in their rowing. Although "age" is the challenge here, the manifestation of that adversity is in the form of two things, 1) the way other rowers and coaches treat and interact with them, and 2) the way they think about themselves as a result of that treatment and those

interactions. An example of these kinds of relationships comes in Daniel's case. Daniel has been rowing at the club since its inception in 1981. As he has gotten older, he noticed that younger rowers and coaches began treating him differently than they used to:

> That has been a challenge, as you get to be an older athlete you still want to compete, I have to find people my age or find people that are younger than me who accept the fact that I still bring something to the table you know… there is some validation issue in this.

This was difficult for Daniel because as a younger rower he created an identity in the club, and for years he identified as a competitive rower. Daniel described some of his proudest moments as the medals he won and the races he competed in. Daniel described the club through the years in an affectionate way, reminiscing about the great relationships he had and the friends he made. When teammates and coaches started to treat Daniel differently because of his age, he began to feel un-supported and under-valued as a contributing member to the ethos of the club:

> Being an older rower amongst younger people… sometimes it can be a challenge for other people to realize that you still want to compete… [our club] sent hardly anyone to Masters Nationals… we took novices, that was it, and at my age I have to try to find someone to row with so I went with novice boats. Once again I end up rowing with someone who isn't that good of a rower.

Daniel expressed feelings of frustration because he was all of the sudden not being taken seriously as a competitor but he still very much wanted to compete. Rowing was to be something that provided validation for Daniel and gave him a sense of accomplishment but those opportunities were harder to come by as he started to get older, "What I like about [rowing] is that when you do well, especially when you medal, it is like, hey I came back from the regatta and I got a couple of medals, that's something, so its that type of gratification thing, you row for the gratification." Daniel defined the adversity not only as

relationships with other rowers but also about his working relationship with the club as a whole. Daniel felt that there was a period of time when the club did not send masters boats to compete. To affect change Daniel then put himself in a position to have some influence on the decision making process in the club. The move by Daniel to become a board member helped him exert some force on the cause of the adversity, "For about 4 or 5 years [our club] didn't really push for people to go to regattas, and when I became [a decision maker] I said we should have recreational crews go compete, we have a trailer, let's go use it!"

Relationships were consistently cited across the board as a point of challenge for both recreational and competitive rowers. These relationships were not always confined between people; rather, they often involved more complex relationships, such as in Daniel's situation, where relationships with entities complicated the experience for the rower. In situations where the relationship between two people was a point of agitation, emotions such as anger, blame and frustration were common.

	Anger	Blame	Uncertainty	Fear	Embarrassment	Determination	Sadness	Denial	Frustration	Discouragement
Meghan: *Injury*	√	√	√			√	√	√	√	
Lisa: *Injury*	√	√	√	√	√	√	√	√	√	√
William: *Illness*	√		√			√		√	√	√
Daniel: Illness			√	√		√		√	√	√
Mary: Injury			√			√			√	√
Alexa: Injury	√	√				√			√	√
Anna: Illness			√	√	√					√
Charlie: Injury			√			√			√	√
Eva: Relationship	√	√	√						√	√

Table 4: Emotions and feelings described following adversity

Limited by Thoughts. During the course of the interviews, a pattern of participants describing adversity as facing their own negative self-beliefs arose. The term self-belief refers to the participant's self-efficacy or ability to complete a task and includes such traits as: confidence, self-esteem, motivation, drive, ambition, etc. Throughout an athlete's competitive or recreational career, they are not going to exhibit unwavering confidence, motivation, and determination. Beliefs about their ability to carry out and complete a task may fluctuate between high and low depending on their enjoyment of and success in their sport. Certain experiences, such as losing a race or getting corrected repeatedly by a coach, may influence the way an athlete feels about himself or herself, which may in turn affect confidence levels. Some participants described these feelings of low confidence, self-doubt, and uncertainty as adversity. Participants did not necessarily spend a great deal of time reflecting on the causes of these self-beliefs; rather, they identified the feelings themselves as the adversity to be conquered. This type of adversity was, by far, the most rarely recounted type, however, it is still significant because it diversifies the understanding of adversity from more tangible things such as injuries and relationships to more intangible ideas such as self-beliefs. Self-beliefs are intriguing because they demonstrate different levels of introspection in participant's understandings of adversity. Whereas some participants could trace feelings of self-doubt and low confidence back to experiences they had, others simply identified the self-beliefs as the source of adversity. An example of this type of adversity was illustrated in Dale's recollection.

During some workouts in Dale's first few years of rowing, he experienced feelings of self-doubt, hopelessness, and low motivation. Dale described what happens

during these situations, “I check out of workouts, if things go bad enough I just say I am done, and I don’t really put in the effort. If it’s a bad boat, or I feel off, or I am sore, mentally it is tough for me to stay with it.” Dale was asked to elaborate on some of the thoughts and self-talk that was going on in his mind during the period before “checking out of a workout.” He explained, “ Despair goes through my mind, self-doubt, [I think to myself], *What am I doing, why am I here, what’s the point, this is stupid, is it all worth it.*” Dale perceived these tendencies as thoughts that were holding him back. The strategies he attempted to use to get himself out of this pattern of low motivation will be discussed in upcoming sections.

Another older rower also had issues with confidence. Mary is an older rower who has issues with her confidence and understood that it was holding her back from realizing her potential. As Mary put it:

> I want to become a better sculler (boat with only one person). In a boat with other people I am okay, in a double I am a little shaky, in a single I lack confidence. I don’t know why, I don’t know what I am afraid of, I don’t want to flip, I am afraid of that, maybe I can’t get back in the boat, but I know I lack confidence and I want to build that back up.

Mary understood that she lacked confidence in the single, and viewed that as a challenge to overcome. She could not identify the source of the low confidence, but she knew it existed and may have been undermining her ability to improve in that boat class.

Different people view the nature of adversity differently. What one person may view as adversity, another may view as nothing but small speed bump to overcome. In order to understand how one bounces back from adversity, it was first pertinent to explore how adversity is interpreted and processed by participants. The next step is to

examine the strategies and factors at play in the task of bouncing back from adversity, also known as resilience.

Practicing Resilience in Rowing

After defining adversity, participants were asked to describe how they dealt with the challenges of those adversities. For instance, how did Meghan continue rowing after her surgery? How did William not allow diabetes to limit his athletic performance throughout his life? Did these participants consider themselves to be resilient? Were they better off from the experience or were they now at a lower level of functioning than before? For some of the individuals who were interviewed, it was a new experience to reflect on the process of bouncing back from adversity; nevertheless, many were able to identify strategies they used and factors at play during difficult situations in rowing. In working through the interviews again, a number of themes, patterns, categories and sub-categories emerged. Further examination revealed there were different stages of resilience that needed to be unpacked. To develop a more in depth understanding of these levels, it was beneficial to position adversity and resilience at a more macro level, before diving into the specific behaviors, relationships, and interactions housed within that structure. That is, in order to consider what is going on within resilience, the structural components of the phenomenon must be considered first.

The Structure of Adversity and Resilience

The overall structure of adversity and resilience encompasses much more than the experience of encountering a challenge or a setback, and then trying to recover from it.

Throughout the data collection process, it became very apparent that not all participants were in the same place. Like Lisa, some had just experienced an adversity and were in the midst of coping, like Lisa; others, like Charles and Daniel, were years down the road from suffering major adversity. Other participants, like Eva and Dale, described adversity and challenges that they had the foresight to predict. The pattern that began to emerge painted a picture of process for resilience. The center of the process always seemed to be the event or situation that constituted the adversity, be it an injury, illness, relationship, or thought pattern, however, there are a number of key ingredients before and after the adversity which influence participants' ability to practice resilience in the face of hardship. Through the combination of descriptions and recollections it was discerned that the process of resiliency can be split into five distinct, but co-dependent, parts; 1) proactive elements, 2) adverse elements, 3) reactive elements, 4) outcomes, and 5) feedback loop. *Figure 7* models how the structure of resilience, based on the present findings, can be viewed in a cyclical, processual fashion.

Balance in Resilience

Before describing each of the four elements, it is first valuable to consider the concept of balance in the lives of rowers. Balance is represented in *Figure 7* below and above the x-axis. Participants oftentimes described their life in rowing with regards to other aspects of their life, such as work, and home. "Home" was usually recounted as anytime not spent at work or rowing. Participant eight, let's call her Dina, described how organized sports, such as rowing, have always complemented her stressful job:

> [Rowing] is also a stress relief from work… a graduation point. There is work, then the workout, then there is home with the kids, and I used to run a law firm, so to go from managing tough lawyers, most of whom were men, and having to be very tough at work, to coming home and being a mom was a big transition, [when I was injured] I didn't get that transition anymore and that was very important.

Dina's observation about rowing as a sort of bridge between work and home is very telling. Many participants echoed the same sentiments when describing the place where rowing fits into their lives. Some spoke at length about how their work life can affect rowing and vice versa. In fact, all aspects of life seem to have some overlap with the other aspects of life. Participant five, Alexa, stated:

> I think everybody needs some kind of release and for me that's pretty much what it is. I can tell from row to row, on a day where I have worked and went to school, and then rowed it's more like an angry row, [compared to] just doing either or where I am pretty sure I will have a really good row. Work and school are pretty stressful right now… I think I leave the workout better than what I came in mentally.

What Alexa described is a complementary relationship where each activity contributes to a kind of balance in her life. From school and work she gets mental exercise and from rowing she gets a physical release, which is almost therapeutic for her. *Figure 5* illustrates a healthy relationship between the different parts of participants' lives. Included in the diagram are work, life, and rowing. In Alexa's case, the bubble for work may be split into two halves, one for her job and one for her schooling, since they are in the same realm.

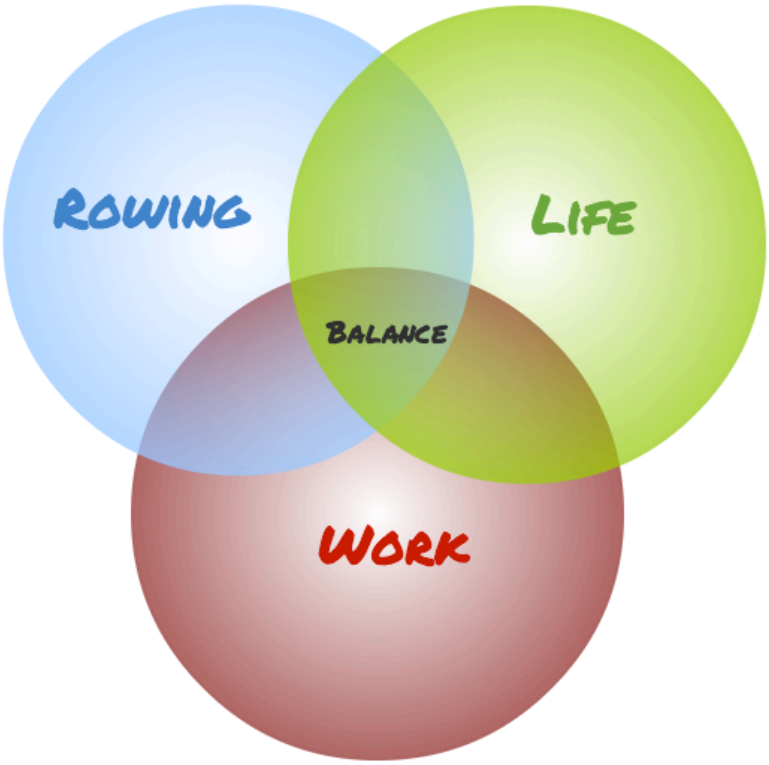

Figure 5: Balance in the lives of rowers.

If one of the elements in the life/work/sport balance were to be disrupted suddenly by something such as an injury in rowing, being unexpectedly laid off at work, or going through family trouble at home, it may have a negative affect on one or both domains of life (depending if it was characterized as a *major* or *minor* adversity). Figure 6 depicts a situation in which the life/work/sport balance was disturbed by a *major* adversity.

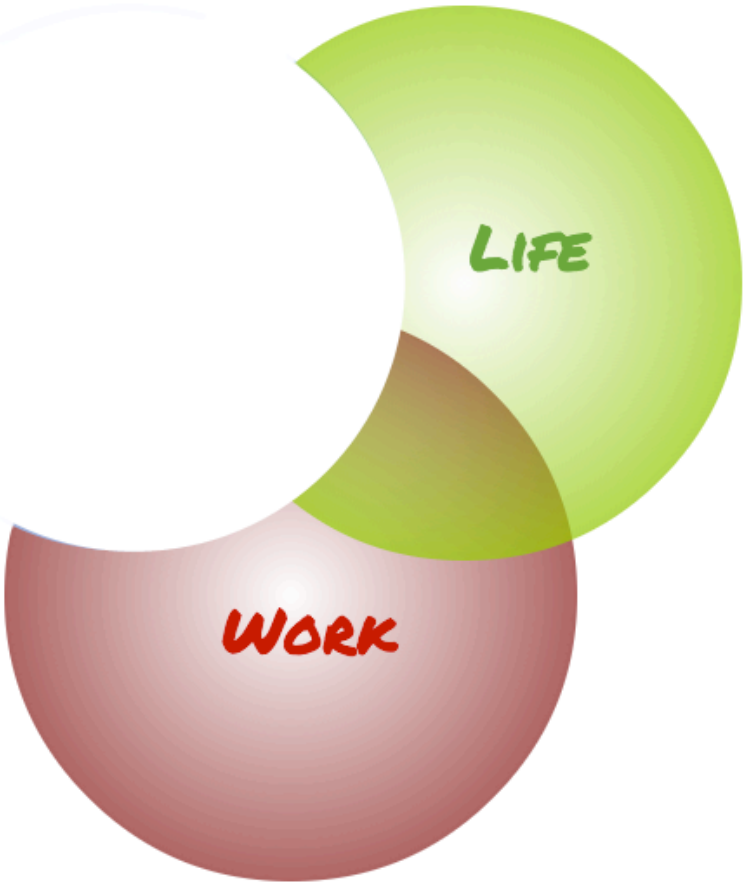

Figure 6: Detraction as a result of disturbance to balance

When one aspect of the equation is removed, then not only the area for that aspect gets removed, but the overlap with other aspects is also removed, effectively leaving the person in a state of unbalance. Participants have described this state as difficult to handle because it is often unanticipated, and they do not have something sufficient to fill the void created by the aspect that was taken away. William reflected on his feelings during the initial removal of rowing from his life, following his diagnosis with pneumonia:

> They had to take my boathouse key away to stop me from practicing, I probably tried to get back too soon, I went a little crazy not being able to do anything… I was just thinking I have to get better, I haveto be able to get back into shape. It was hard, after about a week and a half they let me start biking again.I probably drove some people crazy because I was going a little crazy, but I was able to recover quickly.

The unbalance depicted in *Figure 6* is the same unbalance referred to in *Figure 7.* As *Figure 7* demonstrates, over the course of the process of resiliency, a rower who runs into adversity will normally fall into a state of unbalance as they are trying to deal with that adversity. The first state of unbalance is called Flux.

Flux

Flux is understood as the period of time when the participants were experiencing a myriad of emotions and feelings. Interpersonal relationships may be strained, and intrapersonal emotions may be elevated. This period of *Flux* can be likened to the period of shock following an acute trauma experienced by someone. The emotions are raw and visceral, and there are a large number of irrational thought processes occurring. In section one, response to adversity was discussed in great detail. Many of these emotions may have been experienced in a period of *Flux*. The time it takes a rower to move out of *Flux* and on to *Reactive elements* and *Resiliency strategies* seemed to influence the amount of time that person remained in a state of unbalance.

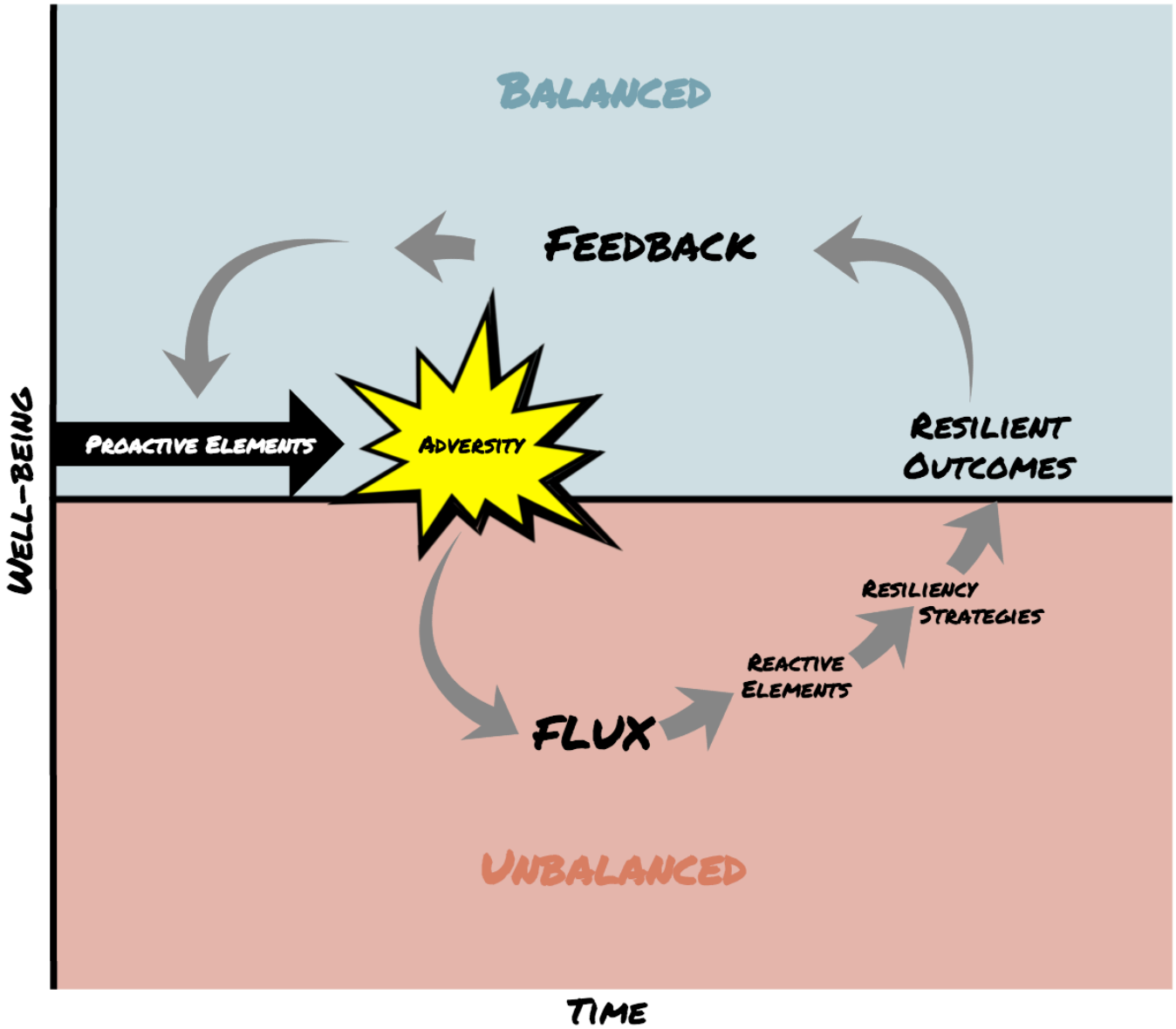

Figure 7: The Process of Resilience in Non-Elite Rowing

Proactive Elements

In considering the process of resilience, it became clear that adversity was the focal point, because there is no need for resilience without some form of challenge. Nonetheless, thoughts and behaviors occurring before and after the adversity also had a positive impact on resilience outcomes and are therefore significant to the process. Proactive elements can also be understood as resources at the participant's disposal. Participants commonly described proactive elements not in direct anticipation of an adversity, rather as a way of living that promoted well being not only in the lives as rowers, but also in their lives outside of rowing. Thoughts and behaviors that occurred before the adversity occurred were deemed *Proactive Elements,* and those after were considered *Reactive Elements.* The former can be understood as factors that are in response to adversity and intentionally or unintentionally contribute formation of *Resiliency Strategies*. The latter will be discussed further in the *Reactive Elements* section, so for now can be understood as elements that are in response to adversity. Existing literature has conceptualized similar components as "protective factors," however, the term "protective" does not fit especially well in this context because it denotes a sense of intentionality in the factors where in some cases there is none. For example, cultivating friendships on a team is not done so in anticipation that you will need someone to hold you up when you falter, it is done because humans are social beings, but friends do help when you are in trouble. Some factors, such as those included in the *Social Support* dimension, may have both *Proactive* and *Reactive* facets, and therefore will be discussed in both sections, as proactive and reactive elements may have different features. Figure 8 lays out the five *proactive elements* that were most prevalent

in participants' recollections of resiliency, and demonstrates how they occur preceding adversity.

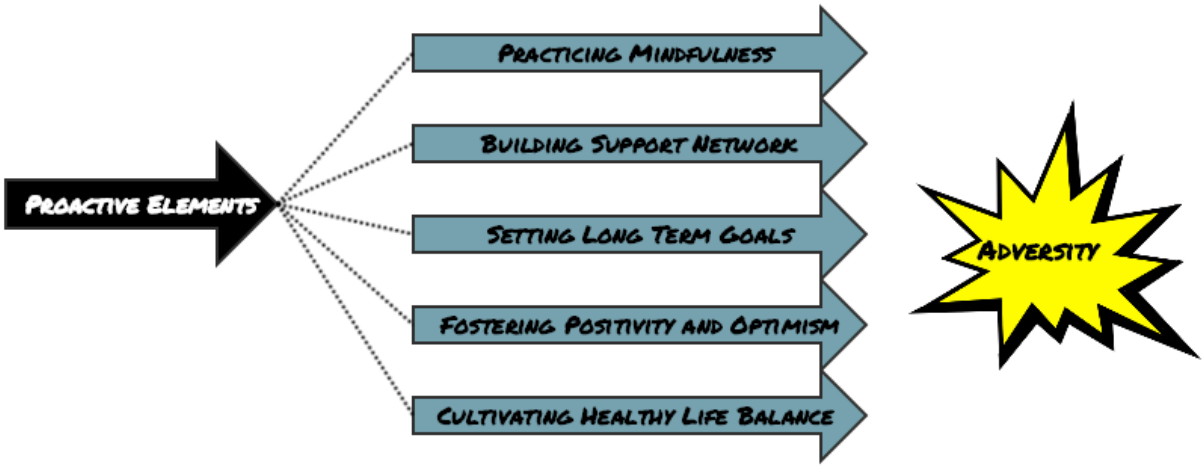

Figure 8: Proactive elements in the process of resilience.

Proactive Elements may occur immediately before adversity, days before, months before or even years before some adversity presents itself. For example, someone who has been practicing mindfulness for a number of years may use that element in dealing with a setback in rowing. The following sections will describe each element in detail.

Practicing Mindfulness. Mindfulness is normally understood as "living in the moment" or having acute awareness of the present. The concept involves completely focusing on the here and now, and essentially putting aside thoughts of the past and future. Mindfulness and living in the moment were re-occurring themes in the interviews conducted. Mindfulness was not always brought up as a way that participants dealt with

adversity; rather, it had to do with their most enjoyable moments in rowing. When asked, about the part of rowing that was most enjoyable many spoke about the "effortless" feeling when everyone is moving together, pushing together. One participant described it as feeling like you are almost giving all of your effort, but it feels effortless.

> When the boat feels perfect… you feel the water, you hear the bubbles running under you, its dead set, and you are flying down the river, you are walking away from the launch trying to pace you at full speed, it feels like… I don't know its just a wonderful feeling that is hard to describe, it feels like you are sitting on top of the world, and you are working hard but it doesn't feel like you are, it just feels powerful.

Another participant described it as being in a state of flow, and when everyone finds that flow state together, the boat just goes.

> There is only one thing on your mind, you are in like a meditative trance state, like something the Dhali Lama probably experiences. In rowing it is easy to get knocked out of that state because you have got so many people that are part of a boat, so if someone tilts their head then the boat falls and you are no longer in that state, but when you are all in that state together, it will only last for a few seconds, but we all know it, and it is sweet. We have only done that 2 or 3 times over the course of 4 years, so it doesn't happen a lot.

Some described this feeling as only being able to focus on the body and what the body is doing; there was no room for thinking about anything else. This is where the idea of mindfulness came into play with regards to resilience.

> I like the technical aspects of the stroke. The challenge of doing something that is very difficult for most people, difficult for me, is to be as body aware as possible. Every single stroke you are trying to make better than the last, and there are so many things going on. When you are rowing, there isn't much room for anything else, you can't think about anything else because there is so much mental power needed for what you are doing at that moment.

Dina described rowing as a form of moving meditation, and to hear rowing conceptualized this way was revealing because then you can begin to view sport as a

form of therapy, a type of therapeutic intervention. Rowing may act as a way to be resilient within the sport itself:

> I get a lot out of rowing. Not only the physical but the mental parts as well, it's really like a meditation. I have been studying Buddism for several years, and we do a walking meditation. Any movement in Buddism that is monotonous, and keeps your mind on one or two things and not allowing it to wander elsewhere is considered a moving meditation. So rowing definitely is a moving meditation for me. You get very focused on a few things, and you kind of go into your body and loose yourself. Another moving meditation is yoga, and there are many parallels between the two.

Another example of mindfulness in action is Mary. Mary has been dealing with pain in her hands for a few years now, and it has been getting worse. She has asked around for help with little avail. The pain she describes sounds excruciating, like a broken finger. She describes how it hurts in the beginning of practice, however, once she gets into the row, she stops thinking about it and eventually she stops noticing it all together. She says that when it stops hurting, she keeps doing what she is doing because she thinks maybe she is doing something right. The capability to get completely involved in something that you are doing, to loose yourself in a moment seems to have the power to get one through tough times. For example, Anna explains how then they were rowing, nothing else was happening:

> Rowing requires a lot of focus, blocks out other things that are going on, when we rowed we rowed, no one really focused on the cancer. This thing I bounced back from because I had something else to focus on, if you have something that keeps you going, that makes you feel confident when things fall apart, gives you more optimism, you don't focus on the crap that is going on, it just gives you something to be joyful about, some thing to feel good about.

Being mindful and carrying acute awareness of the present seemed to help participants live in that moment and put other worries aside. Therefore, practicing mindfulness before adversity strikes may have a considerable impact on a rowers' ability

to cultivate a resilient mindset under pressure. With this being said, mindfulness can be understood as both a *proactive element*, and a *reactive element*. An example of how mindfulness can act as both comes in the form of a story Charles recalled. In this story, Charles spoke about the idea of meditation as a form of dealing with a challenging situation. It was his senior year and his boat was ranked number one going into the eastern championships. They had won their heat and they were going on to the final. Everyone expected them to win. Charles began experiencing what he described as a fear of failure, that is, he was worried that they were going to loose and not live up to the high expectations. He was worried that the anxiety and the nervousness were going to somehow affect his performance. Therefore, he separated himself from the noise of the crowds, and the pressure of the situation and began meditating. He took himself away from the stressful situation and cleared his mind. It was not clear from Charles' description if this is something that he had practiced before, although it was clear that he was not aware that he was practicing mindfulness, he was just doing something to help calm himself down emotionally and physically. It does seem, however, that there may be two sides to mindfulness, focus, and energy. One thing that stood out about Charles' story, however, was that he did not purposefully practice mindfulness in his rowing prior to this situation. Other participants discussed how they have cultivated this skill.

Alexa spoke about the connection between the mind and the body, and how she has used her mind to shape her physical experience of pain. What she described seemed to be a form of mindfulness and should carry some weight with regards to resilience:

> I had to take a couple of weeks off, because that is what the doctor said. After two weeks I was done with not participating, so it turned into a mind over matter situation. I wasn't going to do any more damage, so I just shut off any kind of

> pain to the shoulder area. I meditated, I just really tried to disconnect the pain from my shoulder to my brain, I closed my eyes, and just distributed the pain elsewhere.

When Alexa was asked how she developed the meditation skill, she referenced a movie called, "The Peaceful Warrior," about a gymnast who was in a bad car accident, but then through the power of mindfulness and meditation was able to recover and compete at the Olympics. She referenced other movies, such as *Miracle,* and external sources that made her really begin to adopt a mind over matter approach.

One has to practice the ability to be mindful and meditate in stressful situations; it does not seem like something that everyone can attain without some degree of practice. The cultivation of this ability could be viewed as a proactive element. However, the average person may not take ten to twenty minutes out of their day to practice mindful thinking, how then, are rowers so attuned to the mind-body aspects of the sport. Why has mindfulness and living in the moment been cited so much in the interviews about adversity? It has been cited mainly because people have described this part of the sport as something they really enjoy about it. Rowing is a sport, as participants commented, where you have to have your mind on what you are doing, exactly where your hand is moving, how your legs are driving, if your head is tilting. Akin to sports like gymnastics, and dancing, rowing requires extreme bodily awareness. This unique aspect of the sport seems to have helped many rowers cultivate this sense of mindfulness, that they employ in times of stress and adversity, without even necessarily understanding that they are doing it. Charles credited rowing with strengthening his ability to remain calm in stressful situations, and be internal when faced with hard situations:

> One thing that crossed my mind was how my dealing with adversity in rowing and the competitive nature of rowing helped me with me with my life outside of the sport; I think it had a profound impact. After college I spent four years in the Marine Corps, one of which was in Vietnam. It was a challenging and fearful time, but my experience with rowing helped me deal with that challenge. I could remain calm in fearful situations because of my experience in rowing where the intensity is internal, not external. In rowing you are not taking out aggression against someone else, you are taking it out on the handle of an oar. You deal with all of it internally, so the power and aggression is much more focused. That really helped me in dealing with people around me who were not in control of themselves the way I was.

Based on Charles' insight into the nature of the sport as a more internal vs. external experience, it may be safe to suppose that there are inherent characteristics of the sport that predispose its participants to cultivate a certain internal mindfulness, which may not have been realized otherwise.

Building Support Network. As with some other elements of resilience, *Social Support* had both a reactive element and a proactive element. The proactive element encompasses building a network of people that can be there for you when you need it, and the reactive element encompasses activating that network after an adversity strikes. For example, an athlete may build a relationship with the rowers in their boat, and then if that athlete runs into a challenge, he/she can then use that network of supporters to help get over that challenge. The point of building a social network rarely is not generally done in anticipation of an upcoming adversity. Rather, it is a network of friends, who can then help during times of tribulation. On the other hand, reactive social support, or activating a support network, does have two dimensions, direct and indirect, which are separated by intentionality. For example, if a friend approaches you to specifically discuss your problem and offer advice, then the intention would clearly be to help with

the adversity. Conversely, if a friend approached you during a time of difficulty, but just offered, say, a lunch date, or something that you would do with your friend regardless of the adversity, then the intention would to just be a friend. The former would be considered direct support, or problem focused support, and the latter would be considered indirect support, or relationships focused support. The difference between the two is nuanced but important. Direct and indirect support will be discussed more in the *Reactive Elements* section. However, this section is more concerned with how participants positioned themselves in rowing communities of people before adversity occurred. All participants commented on how they had called on other people as a form of support during hard times. Building a support network, however, does not just happen. Friendships and interpersonal relationships that can contribute to resilience must be cultivated through a vested interest in the people that one interacts with. Many participants remarked that rowing in the club was more than just a athletic experience, it was a real family, and provided members with a community surrounding the activity. Daniel commented on this aspect in relation to how rowing is really more than just a sport for him:

> Rowing really helps with stress relief. I would miss rowing so much if I stopped doing it. I would miss it for the community, for the challenge, there are some nice people down there. I would miss them. It is a very supportive community, [my wife and I] see them outside of rowing, all of these people. Some of my closest friends are rowers, so I guess support is probably the most important thing to me.

Other participants commented how they had built friendships at the club, and rowing was the mechanism through which these meaningful relationships were built. For example, Anna developed a strong relationship with a few of the members of her boat during the years that they had been rowing together. These friendships proved to be very valuable

during her treatment and recovery. Dina explained how rowing gave her much more than sport, it gave her many things, "[Rowing] is not a "two-for-one" it's a "many-for-one." I get a whole lot out of one thing. I like the workout, it gets me outside, it gets me on the lake, I also socialize with the people at the club, and my crew socializes with each other."

Lisa was another participant who described how the rowers on your team really become your family, " I am sad that I am not able to participate because these 16 women are like my family." Over and over again it was mentioned that the rowers on competitive teams or even in recreational groups really form bonds that go deeper than just teammates. They are the people that practice with each other day-in and day-out; they suffer together next to each other, and in many cases face the same challenges. It is in these formative times before adversity occurs that strong friendships are really built. And it is after adversity happens that these relationships can become very important.

Setting Long-Term Goals. Setting long term goals is actually a bi-product of perspective, that is, taking a wide perspective and seeing long term rather than immediate results. The idea behind setting long-term goals is that there will be many shorter-term goals that need to be accomplished in order to get to the long-term goals. However, inevitably, there will be some bumps in the road on the journey to the long-term goal. These bumps may de-rail some of the shorter-term goals, but because there is a long-term goal that has been set, then one would still have an overarching motive to work toward that goal, and that person may exhibit more resilience because an adversity may only affect one part of that journey. This point is better communicated through a story that a participant told. In fact, this same story was used to demonstrate another point earlier

when describing how experience can shape ones' perception. In this context the story will demonstrate a different, but similar point. Charles, an older rower, broke his wrist while playing hockey in high school. He thought he would never row again:

> When you are that young you don't have any sense of perspective or distance, so that was traumatic for me. I thought I would never row again. But subsequently, in the future, a couple of times when I got injured and I was worried about coming back, I realized that I had to look at it in the long term. If I worried about coming back immediately to training, the odds are I would have exacerbated the situation rather than improve it. So you have to allow yourself the wisdom of perspective and distance.

Using this story as groundwork, it makes sense for rowers to set long term goals that keep their perspective in check. So if long-term goals were set, one would approach adversity with those goals in mind, and not rush the recovery process. Another participant described how adopting a wider perspective could help from a moment-to-moment basis in rowing. Alexa explained how, in rowing, each stroke was a new opportunity for improvement, with the past strokes behind her:

> Sometimes being angry in the boat is not good. [My coach] used to say to not carry over your anger from stroke to stroke, make the next stroke better than the last one. In softball, sometimes one at bat would ruin my day, so being overly angry is not a great way to handle adversity. I don't think I carry it over to rowing, I think I have grown up.

Alexa highlighted a good point about experience in reference to perspective taking. Strengthening a more long-term perspective is impacted by previous experience. Because of her experiences of getting angry after an at-bat in softball, she has grown and realized that her anger was not constructive. Perspective, then, may be strengthened after experiences of adversity.

Fostering Positivity and Optimism. Fostering positivity and optimism was another pattern that emerged as a proactive element in the resiliency process. In this context, positivity is defined as showing a constructive, or optimistic attitude about ones' situation. For example, when *Joe the rower* is faced with a challenge, let's say Joe's back hurts, he can either approach it in a positive and optimistic way by thinking that if he stretches and does back exercises it will stop hurting, or he can approach it in a negative, pessimistic way, and think that it will never get better no matter what he does. This has many parallels to incremental vs. entity theories of intelligence, which will be explored in the discussion section. Specifically, participants described their inner dialogue as one of positivity, and encouragement, instead of something more negative. For example, Alexa, a relatively novice rower who has been an athlete for her entire life, discussed the thoughts that ordinarily go through her mind when she is training or competing:

> I always say something positive to myself when I am in some kind of trouble or I am going through something hard. Let's say I completed a really good squat or a good dead lift, sometimes rowing is like a mix between dead lift and a squat, remembering how that feels and transitioning that to the boat, talking through it, that really helps me. So in the boat I will actually talk to my body… legs, legs, legs, and toward the end [of the race] I can pretty much talk myself into those last hundred meters. Before [rowing] I was strength training a lot and I'd would talk to myself… let's go, let's go… it would get me through the workout, anything to get me through the workout. When things are getting me down I just say positive things to myself, I try to turn the negatives into positives, and soon they will become positives.

Alexa's self-talk and her inner dialogue was mainly positive through training and competition. This positivity seemed to contribute to her ability to remain optimistic even in the most challenging situations. For example, before Alexa was a rower, she was a softball player. She recounted a situation her sophomore year when she was hit in the

face by a stray pitch and had her front tooth knocked out. She was able to use her positive outlook to look at the situation in a different light:

> The girl didn't do it on purpose, although my whole team wanted to jump her after the game, I was like, guys it's ok, just win. Yea it sucked, but the funny part was that the root canal that I had to get was worse than the actual injury. It really sucked in the moment, but made a good story for later.

Alexa was able to view this situation through a positive lens because she continued to have a good attitude about it. She realized that the pitcher had not intentionally hit her in the face, and that there was no sense in getting angry and really negative about the whole situation. Alexa described another situation with a rowing coach that she really did not see eye to eye with. Alexa described how she used humor to get through some of the tougher times:

> We played a couple of pranks on the coach, I'd take her snacks on the bus and hide them, I'd turn up her headphones really loud while she was sleeping, stupid stuff like that, but I had to find a way to have fun. If it is a stressful day of rowing if people are not having fun in the boat, and we are rowing badly, sometimes I will crack a joke to just smile and make the best of it, humor can definitely find its way into coping with challenging times.

Cultivating Healthy Work/Sport/Life Balance. The last pattern that was recognized as a proactive element in the resiliency process was cultivating a healthy work/life/sport balance. As Figure 5 and 6 illustrate, there is a balance in the lives of rowers that requires all three parts to be in a state of equilibration. In Figure 5, when the rowing bubble was taken out of the equation, it detracted from the other parts of life; however, it did not completely throw off the balance. If an unhealthy work/life/sport balance was fostered, then a subtraction of rowing would have a much more detrimental effect. Figure 9 and 10 illustrate this concept.

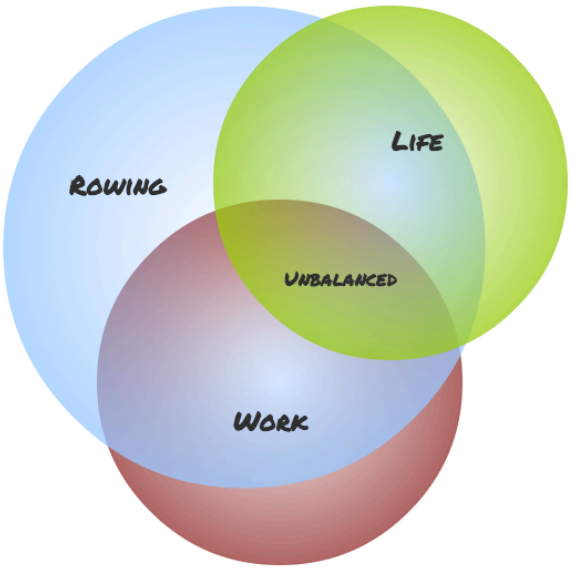

Figure 9: Unhealthy Work/Life/Sport Balance

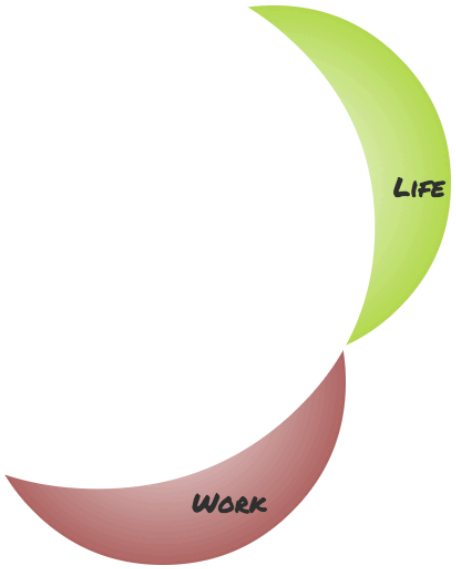

Figure 10: Detraction as a Result of Disturbance

These two figures illustrate that if there is too much overlap between one facet of a participant's life and the other facets, it is more likely that the loss of one will have a more major impact on the others. Let's use Dale as an example. Dale has been rowing at the club for five years. His wife rows at the club as well, and as a result, there have been times where tension has arisen as a result of their rowing together. Because Dale has more overlap between rowing and his home life, he has set himself up for being affected by a more major form of adversity. Whereas figures two and three showed an example of a more healthy balance between three facets, figures five and six illustrate what begins to happen in Dale's case.

Reactive Elements

Proactive elements were discussed as the intentional, or sometimes unintentional, preemptive ingredients in resilience that strengthened a participant's ability to deal with adversity when the time came. Proactive elements encompassed positive thinking, optimistic attitude, practicing mindfulness, long term perspective, and a building support network. People can use all of these after experiencing an adversity, however, they can be cultivated and refined prior to the adversity. What makes reactive elements distinctly different from proactive elements is that they are in direct response to an adversity. For example, Alexa used a form of mindfulness to help deal with pain following an injury. This was a reactive element, however, she had practiced the skill of mindfulness before the adversity occurred, so mindfulness in this context would be considered a proactive element. On the other hand, distancing one's self from a situation through either adaptive (e.g. physical distance) or maladaptive (e.g. blame, anger) would be considered reactive elements because the structure was not formed prior. Figure 11 illustrates the patterns observed in reactive elements.

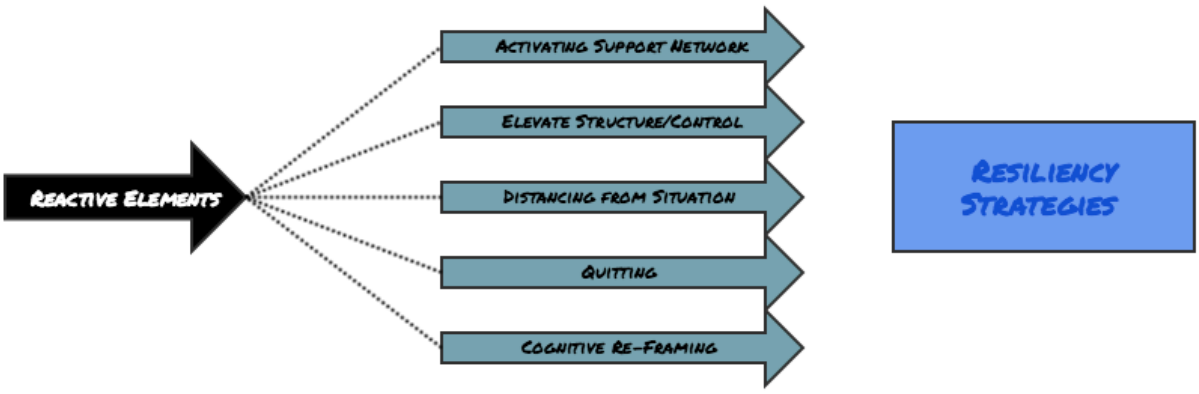

Figure 11: Reactive elements in the process of resilience.

Five patterns emerged as reactive elements. First, and foremost, the activation and interaction with one's support network was the most consistent and, coincidentally, complicated reactive element. Social support following the adversity will be discussed in the most detail. There are three complementary parts to social support, 1) the type of support, 2) the perception of the support, and 3) the forces influencing the perception of support. Second, participants employed multiple strategies to elevate their sense of control and structure in their situation. Throughout the data collection process, participants explained how uncertainty was a fearful feeling for them. By implementing structure, such as planning, they were able to find a sense of security in the control that structure brought. Third, participants commonly described trying to distance themselves from the situation. Distancing came in the form of adaptive and maladaptive mechanisms such as creating physical space or placing blame on someone else for the challenge. Fourth, quitting was referenced quite a few times over the course of the interviews. Quitting is a complex reactive element because of the negative connotations that society has associated with the concept. Perceptions and experiences of quitting in reference to resilience will be discussed further. Lastly, it was found that participants who were able to cognitively re-frame situations, that is, think about them differently, were able to be more resilient.

Activating Support Network. *Activating support network* refers to any interactions that a participant has had with other people in regards to the current adversity that they were facing. Be it the participant reaching out to people for support, or people

offering support, both would be considered a form of activating the support network. In discussing social support with participants it was immediately clear that the same type of support did not work with all of the participants. For example, while Daniel would have weekly dinners with his group of friends who had all gone through similar health issues while rowing, Lisa wanted almost nothing to do with her teammates while she was going through her injury. There arose three complementary parts to social support that needed to be in alignment in order for the support to be effective. First, the type of support needs to be identified, and second, the perception of the support needs to be explored, and third, the forces influencing ones' perception of the support need to be understood. If these three elements are in disharmony, then the support, or elements of the support may not be helpful for the individual. There needs to be agreement between all three of these parts in order for social support to be a positive force in the process of resilience.

Types of Support. The findings indicated that types of support could be divided into two types, direct support and indirect support. Direct social support is a more upfront form of support where a person either asks directly for help in a situation, or is offered direct support for the situation. For example, Lisa received a lot of direct support from other rowers at the club, which was not necessarily always wanted, "Everyone is hugging me, asking me how I am, it's like, I don't want to talk about it anymore, I don't want to hear it because a) I am embarrassed, and b) this was six days of my life, I am very regimented, I am a planner and I don't have this anymore." Direct support is the typical type of support that comes to mind when someone is in a time of need; it is very problem focused. Indirect social support is more concentrated on the relationship itself rather than

the problem. For example, Lisa had a friend who offered to take Lisa out shopping at the mall. This support meant much more to Lisa and went further than any more direct support others had offered:

> She said she didn't go to practice that night because she wanted to come spend time with me, and that meant a whole heck of a lot to me because I am not sure if I would do that, give up my regimented thing on a Monday night, that was a big deal for me. She knows how I feel, she knows me well enough to know I don't want her to come ask me how I am feeling. She knows me better than that.

These two different instances of support are prime examples of how someone can perceive the support differently. In the perception of social support, there were two ways that participants responded; either the participant accepted the support as helpful and was able to use it, or they rejected the support as unhelpful and disregarded it. For example, Lisa rejected direct support from many people, but accepted indirect support from a small number of people. After the interview, Lisa revealed that speaking with the interviewer was helpful in the process because it allowed her to work through her emotions some more, which may be a form of indirect support. If people choose to accept or reject certain types of support, the next question naturally becomes, what factors influences their decision? It appears that four factors influenced the participants' perceptions of support, 1) their orientation on a spectrum of identity, 2) contextual factors, 3) re-alignment of values, and 4) relationship appraisals. Figure 12 illustrates the process of social support in resilience.

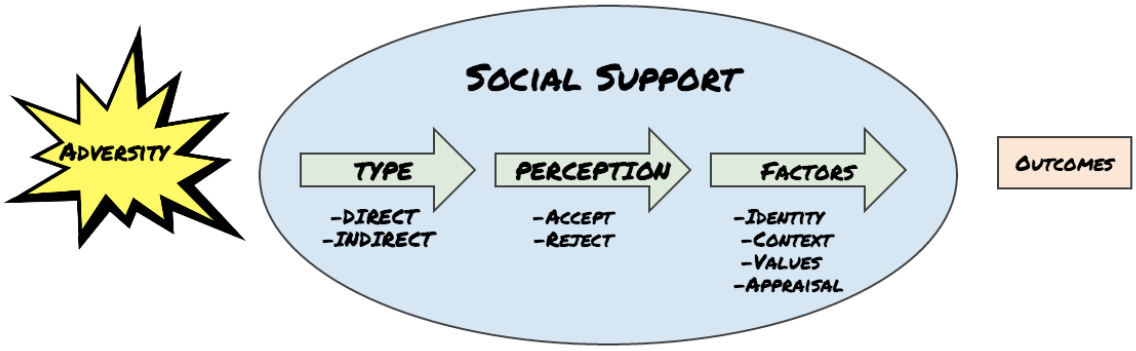

Figure 12: The Process of Social Support in Resilience.

Identity and Support. Social support is the backbone of resilient functioning. The one constant throughout all of the interviews was the social aspect of the experience. There were, however, very different perceptions of support, and these differing perceptions led to differing experiences. For example, Anna was diagnosed with a rare form of cancer. She was a competitive rower and was fearful that her coach would make her stop rowing. When she told her coach, Sharon, she did not make a big deal about it, Anna was not treated differently by Sharon, which made her feel like there was more to her than her illness. Sharon allowed Anna to continue rowing on the team, and scheduled practice around Anna's treatments. Although Anna did not identify with her illness she still felt weird and embarrassed about what was happening to her. Anna desperately wanted to maintain her identity as a competitive rower and Sharon made her feel like she could; Sharon made Anna feel normal. When her teammates did not make a big deal about her illness, Anna felt like she could just be herself. Anna explained that when they were rowing she did not think about anything else; when they rowed, they rowed. She

was allowed to continue doing something she loved, which brought her something to look forward to; it kept something that held great meaning in her life intact. Anna recalled that if she didn't have rowing through the hard times, and if the team and the coach did not support her in the way they did, then she would have been very depressed.

Anna's was a perception of support based around identity, that is, she appreciated that people did not make a big deal of her illness because it allowed her to maintain her identity as a rower. The response let her row, and it let her continue to be herself. There are, however, different perceptions of support, which are rooted in differing understandings of ones identity. For example, Meghan was on a competitive rowing team, much like Anna, and she sustained a major back injury during practice. From that point on she developed anger and resentment toward her coach. For eight months she delayed back surgery and continued rowing in an attempt to show her teammates and her coach how worthy and strong she was. However, she received no such support and she became angrier because no one was acknowledging what had happened; no one asked her how her back was doing. In other words, no one made a big deal about it. This was the same kind of support that Anna had received, however Meghan perceived it differently because of where the motivation was coming from. In Anna's case, she wanted things to remain the same, she wanted her identity to be intact, and did not want to stop rowing. Meghan, on the other hand, was a younger rower who was still establishing herself on the team. She wanted to be acknowledged and validated. Meghan was seeking approval and affirmation. She was forming her identity, where as Anna was preserving it. Meghan and Anna were at different places in the development of their identity. While Anna had been rowing on the team for a decade, Meghan was new to her team and was trying to

establish herself as a serious competitor. Figure ten illustrates the idea on a spectrum of identity.

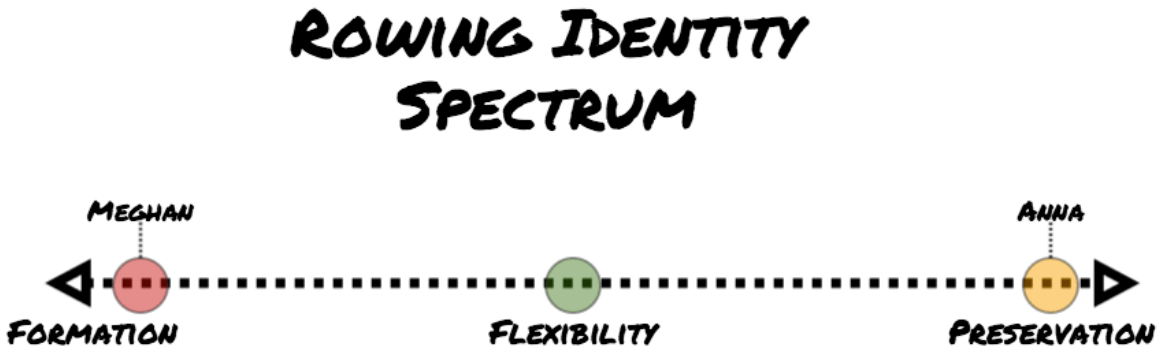

Figure 13: The Spectrum of Identity in Resilience.

As figure 13 illustrates, there are three areas where a rower can be with respect to identity: formation, flexibility, and preservation. Formation and preservation, as previously described, can be found on opposite sides of the spectrum, and seem to be dependent in a rower's comfort level on the team. The area in the middle has been termed *flexibility* as it is a place where someone would be after they had formed an initial identity as a rower and are in the state of exploring what that identity means to them. For example, Lisa had been on the team for a year when her injury occurred. She identified herself as a rower, but was still building her role on the team and was not to a state of *preservation* yet. Where participants were on the spectrum of identity had an impact on their perception of social support.

Values and Support. There is another dimension to how social support is received. The first way, discussed in the previous two accounts, was what the participants were motivated by, what they were searching for. At 39 years old, and an established competitor in her rowing club, Anna wanted to preserve her identity and continue with her life and rowing as normally as she could. Meghan, on the other hand, was 18 years old, and was a relative newcomer on her team with high expectations of herself and from coaches. She was seeking approval and validation of her effort; she was trying to form a strong identity. Meghan resented the fact that a bigger deal was not made about her situation. This idea was the first dimension of perceiving social support, let's call it "perception motivation." This essentially means that participants perceived social support differently. The support itself may not differ, like in Meghan and Anna's case, but the force behind the perceptions has different impacts on people. The second dimension, which may in fact fall somewhere under identity, is more of a values issue than it is a motivation per se. Mary is a masters rower who is 62 years old and has been dealing with arthritic-like pain in her hands during rowing. She doesn't know exactly what is going on with this pain, but she is overwhelmed because of the uncertainty surrounding this issue. She cannot see a doctor because of a complication with insurance, so she is left to deal with the pain on her own. There were a number of times when speaking with Mary where she referred to "whining" about the pain she was experiencing. However, after mentioning that she was "whining" Mary stated that she did not like whiners and has never been a whiner. During one of those occasions, when Mary was "whining" another rower in the boat screamed out, " there is no whining in the boat." This was helpful for Mary because it seemed to align with a value she held; that is, she did not ever like

whiners. She was then motivated to align with her values, so she internalized the comment made by the other rower, and was able to work through the pain. In a way this is similar to the first "perception motivation," identity, because Anna valued preserving her identity, Megan valued forming her identity, and Mary valued aligning her actions with her principles.

Relationship Appraisals. Envision yourself in a situation where you have decided to seek help from someone in your support network. You speak with a number of people and gather their words of wisdom and advice. Some tell you to do one thing, others tell you to do something different. Who are you going to listen to? Relationship appraisals help answer this question. The findings indicated that participants gauged the importance of the support offered by the way they view the relationship with the person offering it. For example, support that came from people whose relationships were viewed as more trusting was viewed as the most helpful, regardless of the content of the interaction. More broadly, appraisals of things such as trust, honesty, authenticity, and genuineness, fall under the umbrella of a principle called *emotional capital.* Emotional capital can be understood as the emotional investment of both parties in a relationship. For participants to make a relationship appraisal, they would first consider the degree of emotional capital in the relationship. The following excerpts describing "honest," "authentic," or "genuine" interactions as the most significant in their resiliency process, are all based on emotional capital. The people who are supporting them are held in high regard. The "supporters," are described as good, honest people, who "get it." Here are some examples.

William experienced minor acute adversity at summer rowing camp when some team members wanted to shorten practice and he took a stand against them:

> Walker was the only person to back me up when I said, "No, let's keep going…We are not done yet," and he stuck up for me. They all wanted to see the new Batman movie and I said, "No, I am here to row and compete, not to see a movie." Walker stuck behind me on that as well, he is a real good guy, when someone else in there to back you up, it means that you are not alone, like I am not the only one.

William held Walker in high regard in this instance, stating that he was a good guy, and that it meant a lot to him that Walker backed him up. Later in the interview William described another instance when he was talking to a teammate for support, but through his language it was clear that the relationship was not as valuable as his relationship with Walker. William also described another instance of support as "weird" because most of the previous interactions with this person before hand were centered on giving each other a "hard time," and arguing. It was clear from the language that support from a friend held in high regard held more weight for William than support from someone who was held in less regard.

Alexa experienced adversity through the relationship with her coach. Eventually it was hard for Alexa to continue to motivate herself to practice for a coach that did not feel compatible with. To find that motivation, she drew support from the team of which she was a part, "This was my team, I went every single day, when I woke up I thought, I am doing this 5am workout for my team, I am playing for my team, and they are playing for me as well." Alexa believed that there was a degree of reciprocity in the support. That is, the team was supporting her, and she was supporting them as well. Because she felt like

there was mutual support from her teammates, then the support from the coach did not matter as much.

Honesty and trust also play a large part in relationship appraisals. Those relationships that were described with a higher degree of trust and honesty were relationships that had a higher degree of emotional capital. When Anna recounted the relationships with the rowers in her boat, it was clear that there was a certain degree of honesty between them. Anna trusted that her teammates would give her their honest feelings about her situation, “I think they had respect for me as a rower, [they] didn't make allowances. They didn't say, "well we have to keep her because of what she is going through, they wouldn't do that as a boat.” It was clear that because there was this honesty between the members of her team that Anna was comfortable rowing with them through her sickness. If she did not feel trust between her and her teammates, then she may have thought they were allowing her to continue rowing just to not hurt her feelings. Anna specifically singled out the rower in the boat who sat directly in front of her. They had an honest relationship in which Anna seemed to take comfort, “Not many people knew how serious it was, but the stroke of the boat, we had rowed together a lot, and she knew, we were very honest, if she felt like I wasn't working hard enough she was very honest, but she never said stuff like that, so…” Anna took comfort in the fact that she must have been performing well enough, because if not, that particular teammate would have told her she was not going fast enough or performing well enough.

Meghan received a lot of different support from different people during her process. She initially pushed away any support from her coaches, in part because it was not direct support. Later Meghan found out that the coach would regularly check in with

the trainer, but she still viewed this in a negative light, " She never once checked in or asked how I was doing with my back... so I just resented her completely... I hated everyone, I hated my university, I hated my coach, I hated my team..." As discussed previously, identity played a large part in Meghan's process and therefore shaped her perception of the support she received. She pushed everyone away because she was still forming her identity on the team. Specifically Meghan pushed away her parents' support:

> I pushed them away, everyone, my parent live so close and I would not even see them, I resented them because they wanted me to move back home. I felt like they were the reason I was here so I hated them for that, so I turned everyone away, I even deleted my Facebook, and I didn't want anyone's opinion.

The only support that Meghan responded to was that of her trainer. She described the relationship in a caring and genuine way. She viewed her trainer much differently than she viewed her coaches, teammates, and parents. There was something about the interactions she had with her trainer that made her trust the support he was giving her.

> He "got it." It was a really easy relationship, he was really nice and he really knew what he was doing, I felt like he genuinely cared for me, as an athlete and cared for my health, and he did everything he could to get me stronger... I loved going to the training room, because I knew I was going to get better and I knew I was going to see someone who cared for me, it was a safe place.

Meghan felt like her trainer genuinely cared about her, and that caring is what it took for her to accept his support. It is not that her friends and family did not support her, it was just that she chose not to acknowledge their support because of her she viewed the relationships and therefore perceived the support.

The findings support the idea that relationship appraisals have some impact on perception of social support. Participant's descriptions indicated that there has to be an element of trust and honesty between supporters and those being supported. There also

has to be an element of respect, and those being supported need to feel valued, and cared for. These elements make up the concept called emotional capital. Those relationships with higher emotional capital will be more effective in the support process then those with lower emotional capital.

Context in perception of support. Context in support primarily refers to the amount of time that someone has had to digest and process the experience they had with adversity. Someone who has had a longer period of time to cope will perhaps have a more rational and deliberate outlook on the support that they are receiving. Context also refers to the type of adversity someone is facing. Someone who has experienced a major acute adversity may want to receive more structured and controlled support, coming from a trained professional, such as Meghan's physical trainer. However, if someone has experienced a more chronic, minor adversity, they may respond to being presented with a number of options that they could then choose. These assumptions are primarily rooted in the idea that those experiencing major acute adversity have little control and are likely to search for ways to ground themselves in something solid, like Meghan working to strengthen her back with the help of a specific plan of exercises. Those who are experiencing a more long term chronic, minor adversity, have more control, and may want to discuss their options before and test out those options before taking a plan of action. Pairing a hard and fast solution to a chronic minor adversity may not be the best solution to promote a resilient outcome, and likewise with a drawn out, deliberative process to deal with a major acute adversity. Reading the context is important when seeking and offering support.

Structure and Control. Control and structure are reoccurring themes and can be viewed as both proactive and reactive elements in the process of resilience. In fact, there is no great place to situate control and structure, so it will be discussed as occurring both before and after adversity. Control in this context can be operationally defined as one's ability to restrict or regulate things in one's life. Structure can be operationally defined as the arrangement of relations between persons or things in one's life. Control and structure are similar constructs that do not appear to be mutually exclusive. That is, one cannot have control without structure or structure without control; they compliment and enhance each other. Perhaps a version of structure can exist without control or vice versa, but strong versions of both concepts cannot exist without the other. That is why these two constructs should be discussed in tandem. The findings indicated that when participants felt like they had more control, then they were able to handle challenges better. This pattern occurred for both proactive and reactive elements. For example, William has been a Type-1 diabetic since he was a small child, yet he has never let diabetes define who he was. In this way, William has been in control of his diabetes. Although it has certainly been a challenge, he has never let it interfere with his rowing. One way that he has managed to not let his disease interfere with his rowing has been by developing awareness and understanding of diabetes. William explained that there are certain things he has to keep an eye on everyday in order to continue rowing. He has to measure his blood sugar levels frequently, and he has to monitor what he eats, and when he eats it. These things were a way of bringing structure to his situation; they were a way for him to

manage it. It was not a short process for William to develop such awareness and understanding. For ten years William attended a summer camp for boys who had diabetes. This experience served to be extremely valuable for William for two reasons. First, it helped him acquire the knowledge to control his condition through structure, and it also helped him develop a healthy perception of his condition. William never viewed having diabetes as a setback or a disadvantage because he perceived it as just another part of his life. He always perceived himself in control of his diabetes and not the other way around.

William used knowledge and understanding to develop a form of proactive structure and control facing diabetes. Others placed reactive structure on their situation to develop a sense of control. As was discussed earlier, Lisa provided structure to her situation by applying a model that she had learned in school. This gave her comfort because it outlined the process for her thereby showing her what to expect. She identified herself as initially being in the shock phase, and then moved on to the resistance phase. She explained that she would need a few more weeks before she would be able to accept what had happened, and even longer before she would begin to forgive. Another thing to remember is William and Lisa's places on the dimensions of intensity and duration of adversity. William had more control because of the long term duration and relatively low intensity of the diabetes. In fact, William has so much control that he has been able to not let the disease affect him much at all. Lisa on the other hand, had a very short amount of time to gain understanding, and so she has had less time to attempt to control her situation. Although Lisa and William fell into different classifications on the scale of duration and intensity of adversity, they both created ways to bring control back into their

hands and out of the hands of the adversity itself. When participants were able to perceive themselves holding the reins of their fate, they were more confident in their ability to be resilient.

Quitting. Quit, abandon, leave, give up, vacate, exit, depart, and withdraw from, these words are synonyms for quitting. Many participants recalled a moment when something was not quite right with their body or their mind, be it injury, overexertion, mental fatigue, but they made a decision that quitting was not an option. They would continue rowing with little regard for the pain it was causing them and a high regard for the activity they were engaged in. Mary, for example, refused to quit rowing for any period of time even though she has a large amount of pain in her hands. For her, experiencing the pain in rowing is only a small part of her experience with he pain in her hands. When asked, “why do you keep going?” she explained the idea:

> I like doing it, I enjoy rowing, I like getting out there on the water, that’s not the only thing my hand pain affects, if I am working for too long on my computer then I know it will hurt later on that day. If I am at home cleaning I know it will affect how my hands feel. It’s part of my life now, and the pain is something I just have to deal with.

She did not want to quit rowing because she knows that it would begin to control her, and she would begin compromising on other aspects of her life, such as cleaning or working on the computer. I asked her if she felt like the pain in her hands limits her, or if she doesn't want the pain to limit her she responded that she doesn't want it to limit her, "I don't want it to limit me, I would have to be completely incapacitated for me to stop doing anything that I do." She went on to reference how now her mother lives with her,

and how much she has slowed down with age; this seems to be something that is frightening for Mary and fuels her determination not to quit rowing:

> As long as I am not bed ridden I will continue to do stuff, I don't like letting that kind of stuff stop me, and if it hurts it hurts. I just keep going; for me that would be a choice that I let it stop me from doing something, as long as I have that choice I will not stop rowing.

Not quitting seems to be a symbol of control for Mary. By her pushing through, she is maintaining control of the adversity that she is facing and proving to herself that she still has a choice. Having control does seem to bring uncertainty because then the question is are you making the right choice, for example Mary was worried about taking time off for fear that she would not get back into the boat:

> Sometimes I will tell myself to take a few weeks off and see if it helps, and I can't do that. I guess it is because I do not want to do it. I don't want to call it an addiction or an obsession; for me it is like taking three steps backward and having to start all over again. I was off for a while at the beginning of the year because of my Dad's health; I think I was gone once for a month. I was so concerned about not being able to row, and it was a setback for me, and I had to build back up. That's what I don't like.

Other participant's viewed quitting or stopping rowing quite differently. The term "quitting" may not even apply as well to these situations. Some participants decided to step away from rowing for a while when they were going through adversity. Daniel recalled that he stopped competing in triathlons as he got older because he knew it was harder for his body to keep going. Daniel did not consider this quitting, rather just making an informed decision about what he could sustain. Dina specifically recalled an instance from earlier in her life during a tennis match when she did not quit:

> I wouldn't stop even though my back was hurting really badly. I ended up herniating three discs. It's not stopping when your body is telling you to stop, and you should stop but your ego is saying I don't want to lose, and even more than not wanting to lose, you ego is saying, I don't want to quit. That's just our society,

> no one want to be a quitter that is what we are taught. I am very guilty of that, but I took that experience into rowing and realized I needed to switch things up or I am going to do the same thing again. So I switch to the other side of the boat, I go to physical therapy; I didn't wait until I was almost disabled to do something about it.

Dina clearly had some contrasting views to Mary's pertaining to quitting. While Mary was a firm believer in pushing through the pain, Dina believed that there was a point where you needed to listen to your body, and do what was necessary in order to keep yourself healthy. While some participants viewed quitting as not an option in every scenario, others understood it as more listening to their body. Dina explained that as she has gotten older she has needed to take care of herself more, which was also a common pattern in some of the older participants. Quitting when viewed through a certain lens can be a very adaptive mechanism, but viewed through a different lens can be understood as a maladaptive mechanism. Those who are on competitive teams seemed to view quitting as giving up and those on more recreational crews viewed it as knowing when to quit or listening to their body.

Distancing from Situation. The next pattern that arose in the findings of reactive elements was distancing from the situation. When participants encountered adversity, some used language that made it sound like they owned, and embracing the adversity as a challenge, and others used language that made it sound like they were trying to remove themselves from the adversity. For example, Alexa described an experience where she had developed a severe case of tendonitis in her shoulder. Her doctor told her she had to take some time off to let her shoulder recover, however Alexa only made it a few weeks before taking matters into her own hands:

> Yea I had to take a couple of weeks off, because that is what the doctor said. To take a rest, after two weeks I was like I am done with this, and it was more of a mind over matter thing, he pretty much said you are not going to tear anything because you are so loose, at that point I made it a mind over matter thing and just shut off any kind of pain in the shoulder area.

While Alexa seemed to face the challenge by going very internal and dissipating the pain from within, others took a different route and created distance between themselves and the adversity by concentrating externally. For instance, Meghan placed blame squarely on her coach and did not take any responsibility for what happened to her. This effectively shielded her and created distance between her identity as a rower and this terrible thing that she had to deal with. Lisa had similar feelings of blame and anger toward her partner. She felt like there was no great explanation for what happened and explained that her partner made a mistake that resulted in Lisa's injury, "There was no reason for this to have happened, I was so angry at her." The ability to keep adversity far away from impacting one's self concept seemed to help participants, at least in the short term, overcome. Instead of looking at the adversity as a part of themselves, they were able to look at it as something separate. This action of distancing perhaps de-mystified the adversity and gave it a name; in some cases it personified the challenge. In Lisa's case the personification of what happened to her was in the form of her partner, which allowed Lisa to take out her emotions on something tangible, like a person, rather than intangible, like a situation.

Cognitive Reframing. The concept of *cognitive re-framing* is not new in sport psychology literature. It is often cited as a means for people to adopt new certain cognitions, emotions, and behaviors. In the context of rowing, participants regularly re-

framed situations to give it more of a positive spin as opposed to dwelling on the negative parts. Cognitive re-framing goes hand in hand with the proactive element of fostering positivity and optimism, because in order to make the best out of a bad situation, one must learn to look at it differently. Although this element does have a relationship with positive and optimistic thinking, it was commonly cited following an adversity, and could be considered the second part of fostering positive and optimistic attitude. There were a few instances when speaking with participants that it was apparent that they had re-framed situations in a different way to make it seem better than it really was. For instance, Dale discussed some bad practices he has had, however, he framed the practices as something that rowers have to go through in order to get to experience the really good practices:

> There have been a few times over the course of my rowing career where I realize that this is the reason I row. Everything comes together and the boat almost feels effortless, the boat is light, the run is great, everyone catches at the same time, and it is those pieces that get you through all of the shitty despair filled practices, and I keep practicing just for the shot that maybe this time will be that great one.

Dale got himself through the hard, uncomfortable practices because he knew that those were necessary to have the really good practices. Perhaps if Dale viewed those bad practices as despair filled, hopeless endeavors then he may not be able to sustain his motivation, ultimately leading to him quitting the team. However, he thinks about those practices differently, more optimistically, and he is able to persevere through hard times.

Resiliency Strategies

Findings indicated that resiliency strategies are developed through an interplay of proactive elements, reactive elements and an assessment of available resources. When

someone was faced with a stressor, they first took stock of the resources they had at their disposal and then initiated them in the context of their adversity.

Resource Assessment. As previously described, proactive elements and reactive elements were essentially viewed as resources by the participants. Proactive elements were oftentimes fully developed resources and could be initiated with relative ease. For example, when Daniel realized he had to have a pacemaker implanted, he could activate the support network that he had already cultivated and seek advice from rowers who had similar issues. Reactive elements were also viewed as resources, but were in reaction to an adversity and may have required more energy to develop. For example, in order for a participant to elevate their sense of structure and control in a situation, they may have to first practice the ability to cognitively re-frame a situation. In order to cognitively re-frame a situation, a person may have to find some distance from the situation. The reactive elements often had an interconnectivity that made them harder to initiate than proactive elements. For example, Mary, who has been having trouble with pain in her hands, has been trying to figure out a solution. Since she had to wait until the first of the year for her insurance coverage to cover a doctor's visit, she was unable to use that form of professional social support, so she had to rely more on the support of her teammates and re-aligning with her values. Therefore, the coping strategy that Mary adopted was a combination of feeding on the energy of her teammates to remain in harmony with her values and also holding herself to a standard that she felt strongly about; namely, not quitting.

The findings suggest that resiliency strategies were broken up into two distinct groups, offensive and defensive strategies. Those who exhibited offensive strategies were concerned with creating a structured environment in which they were in control. These individuals were very active in their resilience process. For example, when her doctor told Alexa that she had to take a few weeks off, she did for a week, but then started to feel helpless and discouraged. At that point, Alexa made a conscious decision to not let the injury control her:

> The moment I started feeling helpless was toward the end [of the week], I was like, no I am not doing this. Especially when the doctor told me I couldn't injure it any further, that moment was when I decided I was going to stop feeling helpless. So toward the end of the two weeks I thought, alright, no more helpless feelings, and just started to do the mind over matter thing.

For Alexa there was a very distinct moment when she adopted her resiliency strategy of mind-over-matter. She discussed this strategy further:

> [The way I coped was] meditation. I just tried to disconnect my brain from my shoulder, I just closed my eyes and imagined what a cell of pain felt like and I just distributed it elsewhere, it worked, but it took a while.

Other participants had similar points where they consciously went on the offensive and took back control of their thoughts and feelings about an adversity. After William lost a championship race by only a second, he decided that he was not satisfied with the result and went back the next year even more motivated to succeed:

> We lost the race by a second, but I wasn't going to let that be the defining moment of my rowing career. I wanted to go back. The next year we never lost a race, heats through finals, it wasn't that we won races, we would shut it down after the first 500 meters, and we were dominant.

Both of these participants viewed the adversity as something to be overcome and they found positive outcomes as a result.

Individuals who adopted defensive strategies were those who felt like control was unattainable and had to adapt to the adversity in other ways. For example, Eva explained that there have been a number of forces over the past few years that have prevented her from breaking into the next level of rowing:

> Over the past four years I have been trying to work up to a higher level and there are certain personalities here that conflict with mine and I blame it on not being a college rower. I didn't row in college, I don't come from that background, I don't have a lengthy amount of time behind and oar, but just because I can't relate doesn't mean I don't want to work hard.

Eva was continually frustrated with not being able to get to the next level after pushing and pushing that she finally developed a sense of helplessness and at some points just decided that she had no control over the outcomes:

> There have been moments where its like, screw it, hands up in the air, I'm done, I quit. I had such a drive to go up to the next level. There has been four years of trying to take it up, take it up, and not feeling like anyone has my back…it has been very frustrating. The personalities that I have been fighting who are on the team could help me take it to the next level but I have no support, it has really made me sometimes just want to give up, and it takes a lot for me to want to give up something.

For Eva, the coping strategy had become realizing that she had no control over the outcome. This allows her to distance from the situation and place fault externally. Since she has not been able to get to the next level, she identified something external, not rowing in college, as a cause of her inability to move up the latter. When Eva assessed her available resources, it became clear to her that no resources could affect change on the situation, so she adopted a more defensive resiliency strategy.

Feedback. The feedback loop is a distinctive feature of the present model. The findings suggested that after an adversity is experienced and dealt with through integration of proactive and reactive elements, there is a period of feedback, where former reactive elements transition to the proactive element arsenal. For example, Alexa described how her mind-over-matter approach helped her to deal with stressors in the future, " [The adversity] had positive affects, it made me better at handling set-back or injuries, in stressful situations I use mind-over-matter to get through them." Functionally, her reactive element of adopting a mind-over-matter approach integrated into her proactive elements for use in later situations.

Charles reflected on early experiences in rowing allowed him to deal with stressful situations outside of rowing with a more level head:

> Dealing with adversity in rowing and the competitive nature of rowing had a profound impact on my life outside of rowing. I spent four years in the Marine Corps out of college, and I spent a year in Vietnam. My experience with rowing had a positive influence on how I dealt with that challenge. Also, when I was an educator, mostly in the years as a headmaster, I had to deal with very difficult people. For example, I had to expel a kid from school, and the parents were going bezerk. I felt that I could remain calm in situations like that because of my experience in rowing where the intensity of rowing is internal, it's not external, you are not taking out your frustration on the end of an oar, it's so much more controlled and internal. Rudyard Kipling wrote a poem: If. One of the stanzas reads, " If you can keep your head when all about you are loosing theirs and blaming it on you… you'll be a man my son." I felt that because of my experience in rowing, I was able to do that.

Daniel described how after he was told he needed a pacemaker, he at first thought it was the end of rowing for him. However, he found out that plenty of athletes compete at high levels and long into their older years with pacemakers. Daniel searched out this info in

reaction to finding out he needed a pacemaker. However, since then, he has used that information to motivate himself to keep rowing and now faces new adversity with the understanding that it is possible for him to keep training and competing.

Discussion

The purpose of this study was to examine the experiences of resilience and adversity in a sample of 12 non-elite rowers. A grounded theory methodology was used to produce a substantive theory of resilience in non-elite rowers. The following sections will focus on comparing the current model and existing models of resilience in elite athletes. The findings generally supported the expected outcomes; that is, when comparing existing models of resilience in elite sport to the current model, it was possible to identify many common features. Rather than separating the discussion with regards to the two primary comparison studies, it is separated based on concept. This structure will foster linkages, discover connections, and create synergy between competing conceptualizations of the concept.

Defining Adversity in Sport

Studies centered on identifying stressors and adversities faced by athletes have yielded relatively consistent results. Mellalieu, Neil, Hanton, and Fletcher (2009) examined stressors encountered by both elite and non-elite athletes and found that they could be broken down into five performance categories: (1) injury, (2) expectations, (3) self-presentation, (4) rivalry, and (5) preparation, and five organizational categories: (1) factors intrinsic to sport, (2) roles in the sport organization, (3) sport relationships and interpersonal demands, (4) athletic career and performance development issues, and (5) organizational structure and climate of the sport. These findings were significant because as the authors pointed out, " no previous study has considered the stressors encountered

by non-elite performers." The findings indicated that there were overarching stressors encountered by both groups, such as: competing while injured, watching other competitors, needing to perform well, large crowds, and times of performance changing (Mellalieu, Neil, Hanton, and Fletcher, 2009). However, there were also adversities encountered more by one group or another, for example, elite performers more commonly spoke of lacking information about opponents and not preparing at competition facility as stressors; whereas non-elite performers mentioned nutritional issues and rushed warm-up more frequently (Mellalieu, Neil, Hanton, and Fletcher, 2009). The present study identified three major areas where 12 non-elite rowers described experiences of adversity in rowing: (1) injury/illness, (2) interpersonal relationships, and (3) intrapersonal emotions/feelings.

Both existing models of resilience in elite sport (The Grounded Theory of Psychological Resilience and Optimal Sport Performance & The Conceptual Model of Sport Resilience) defined multiple types of adversity that the athletes had faced. Fletcher and Sarkar (2012) identified three main categories of stressors: competitive, organizational, and personal. Although the authors included that the stressors varied considerably by frequency, intensity, and duration, there was no attempt to differentiate responses to adversity based on those three degrees of variation. There was, however, a discussion of how context, either political or socio-cultural were factors that influenced how and what athletes perceived as adversity. For example, athletes who competed in the Olympics before 1990 identified the political environment as a significant stressor, as opposed to those after, who viewed publicly sourced funding as a significant adversity (Fletcher & Sarkar, 2012). Therefore, the larger context that the Olympic athletes were

competing in (i.e. era & international scale) had a great influence on their training and competition. Presumably, because elite-athletes athletes compete on a much grander scale than non-elite athletes, perhaps things like international relations, and USOC funding-allocations will have a larger effect on these athletes. An analogous adversity that was defined in the present study was the relationships that certain rowers had with the administration of the club throughout the years. Arguably, the political stressors to which Fletcher and Sarkar (2012) were referring fell under their "organizational stressors" category. Daniel described how certain decision makers in the club did not want to race at national regattas, yet other individuals did. This created a divide in the club that led to tension between board members, support staff, and members. Although the tension was a very real adversity in one context, Daniel described one of his most enjoyable experiences with the club was nearly thirty years before he had raced at the Masters World Championships, which was facilitated by his involvement with the club. Therefore, the political context in the club had both created a very desirable experience at one point for Daniel and also a very undesirable one at another point. Hence, non-elite and elite athletes identified political climate, albeit on different scales, as a stressor; and furthermore, both should be viewed in the context of the time that they occurred, as context is an indicator of what would be experienced as an adversity.

In addition to organization stressors, Fletcher and Sarkar (2012) also identified competitive and personal stressors. Although the authors did not go into a great amount of detail on what constituted competitive and personal stressors, it should be noted that non-elite athletes experienced a range of stressors both in the competitive and personal realms including, but not limited to: injuries, illnesses, and tense relationships. Galli

(2005) went in to a greater amount of detail on the experiences of adversity as described by high-level athletes. Galli (2005) identified four major categories of adversity: (a) injuries, (b) performance issues, (c) illness, and (d) leaving home. Galli's (2005) identification of four categories of adversity generally lined up with the categories defined in the current study. Injury and illness were consistently cited as adversities across the present study and Galli's (2005) study. Performance issues, however, were not as prevalent in the descriptions of adversity in the non-elite rowers. The few occurrences of performance issues were not directly related to winning and loosing, rather the participants emphasized un-enjoyable experiences as a result of low performance. For example, Dale referenced having moments of self-doubt and despair when he was rowing poorly or the boat did not feel very good; whereas elite athletes spoke of performance issues mainly in terms of performance outcomes, such as suffering a loosing streak or being burnt out (Galli, 2005). This finding may indicate the non-elite athletes and elite athletes may make assessments of performance differently. Non-elite athletes may consider the process of performance in an assessment of success whereas elite athletes may more narrowly define successful performance as winning.

Lastly, Galli (2005) identified leaving home as an adversity for a number of elite athletes. This stressor seems to be a unique stressor for elite athletes. Nonetheless, a version of this stressor could be interpreted as how stressors outside of sport can affect performance inside of sport. In the example Galli (2005) gave of a participant who viewed leaving home as a stressor, the individual had recently found out that her mother had been diagnosed with cancer. It was hard for the individual to leave home to compete when she knew her family was going through a hard time. Similarly, there were

adversities experienced outside of rowing that affected practice or competition. For example, when Anna was diagnosed with cancer, this impacted all domains of her life. Therefore, in both elite athletes and non-elite rowers, there were stressors identified outside of sport that had some influence on their experience inside of sport.

Responses to Adversity in Sport

Galli and Vealey (2008) began to explain the process of resilience in athletes at the unpleasant emotions that accompanied adversity. The descriptions of adversity from the participants all centered around feelings of sadness, anger, frustration, embarrassment, pain, confusion, and neglect. Galli and Vealy (2008) described these feelings as a part of the stage of agitation, in which athletes experience these feelings while simultaneously engaging in cognitive and behavioral coping strategies. The simultaneous nature of the agitation process was thus a defining feature of their experience:

> Although all of the athletes discussed using coping strategies to deal with unpleasant emotions, the process of experiencing and coping with unpleasant emotions did not seem to occur in a sequential fashion. Thus the second stage of the model represents athlete's agitation, as they simultaneously struggled and coped with their adversity.

Non-elite athletes, in the present study, also experienced an array of unpleasant emotions in conjunction with having experienced adversity (see table 2), which included, but were not limited to, anger, doubt, frustration, denial, sadness, and embarrassment. For example, Lisa initially experienced anger during the race in which she was injured, then as time progressed she experienced fear and embarrassment. During the subsequent few weeks when she was not practicing with her team anymore, her emotions shifted to more

sadness and discouragement. This finding would suggest that as individuals moved through different stages in the process, they experienced different emotions. As Lisa's anger and feelings of blame began to dissipate, they were replaced by more appropriate feelings for what she was experiencing. Galli (2005) described how emotions could change as a result of the context, "The athletes often expressed having numerous of these unpleasant feelings at a given time, and as noted in the previous section, often experienced changes in these feelings over time." In the present study it was common for participants to describe emotions transforming. Meghan experienced changing emotions over time. When she was first injured she felt sad and upset, however, she quickly moved on to feeling like she had something to prove. After her surgery she felt emotions of intense hatred and was full of blame, which she placed on others. Therefore, a similarity that appeared between the present study and Galli and Vealey's (2008) model (derived from Galli (2005)) was that although agitation was simultaneous, emotions surrounding adversity seemed to develop in a sequential fashion and change over time.

Fletcher and Sarkar (2012) made little attempt to catalogue the unpleasant thoughts and emotions that Olympic champions encountered. Rather, the authors discussed responses to these thoughts and emotions in a more general sense. The concepts of challenge appraisals and meta-cognitions explained how Olympic champions were able to regulate their emotions and use them to their ultimate advantage. As described previously, challenge appraisals occur when an athlete encounters a demand and evaluates the demand as an opportunity for growth. Fletcher and Sarkar (2012) reported that Olympic champions frequently cited stressors or negative events as sources of motivation and opportunities to get better. Similarly, in the present study, Dale

described a feeling that mirrored the idea of a challenge appraisal. He described that sometimes when he was having a bad practice, instead of thinking about how bad the row was going, he thought about how it was what he had to do in order to get to have really good practices. Much the same, the concept of perspective, in the present study, is centered on a rower's ability to keep long term goals in mind when assessing adversity. Charles commented on this concept in depth when he recalled his experience with breaking his wrist in high school; looking back over 50 years of rowing, it seemed inconsequential to him. However, it took Charles a while to understand how that adversity could be viewed as a positive in the long term. The idea of appraising setback as an opportunity for growth was present in non-elite rowers, yet it did not seem to be as developed and prevalent as in elite athletes. So it is possible that in the Fletcher and Sarkar (2012) model, Olympic champions experienced similar negative and unpleasant thoughts as those described in Galli (2005), but Fletcher and Sarkar identified ways in which Olympic champions viewed those emotions differently. This finding supports the expected outcome that the underlying processes between elite and non-elite athletes may be the same (i.e. challenge appraisals), however, elite athletes have more finely tuned their ability to view demands in a different light, just like they have finely tuned their physical to be among the best in the world.

The second concept Fletcher and Sarkar explored relating to thoughts and emotions really piggy backs off the first: meta-cognition. Meta-cognition was defined as an individual's knowledge of, and control over his or her cognitions (Flavell, 1979). Everyone is capable of some degree of meta-cognition; the differentiation comes in the degree to which an individual has knowledge of and can regulate their emotions. Meta-

cognition, then, may be a prerequisite to developing positive challenge appraisals. If an athlete has a high degree of meta-cognitive skill, then they will be able to efficiently identify emotions and decide how they will use them. If so happens they decide to use the negative emotion as a motivation or driving force, then the individual has developed a positive challenge appraisal out of a negative thought or unpleasant emotion. The findings of the present study suggest that although non-elite athletes are capable of meta-cognition, and are aware of perceiving adversity in different ways to make it an advantage, the degree to which they engage in challenge appraisals is much different than that of elite athletes.

Factors Influencing the Resilience Process

The present model identified a number of proactive and reactive elements that exert influence on an individual's ability to be resilient (see tables). More commonly referred to as "protective factors," proactive elements are thoughts or behaviors occurring before the adversity that have a favorable influence on the resilient outcomes. Reactive elements, more commonly referred to as "coping strategies," encompass those things done after the adversity has occurred in an attempt to return to a balanced state. Galli and Vealey (2008) separated factors that influence positive outcomes into two groups: (1) cognitive coping strategies, and (2) behavioral coping strategies. Galli and Vealey also identified two factors, which influenced the development of coping strategies and the process of agitation: (1) personal resources, and (2) sociocultural influences. Although the present model labeled these elements differently, there are still many similarities between Galli and Vealey's model and the present model.

First, in Galli and Vealey's conceptualization personal resources that influence coping strategies, they mention positivity, maturity, determination, competitiveness, commitment and persistence as personal resources that shape coping strategies. Galli (2005) went into more depth on the personal resources and explained that although the personal resources were understood as personality characteristics, they were not considered static; rather, they were developed through previous experience with adversity or interactions with others. In this way, Galli and Vealey's (2008) model conceptualizes resilience as a process, but still includes elements of personality traits. All of the personal resources that Galli and Vealy identified in elite-athletes were also identified in non-elite athletes, but the most prevalent were positivity, maturity, and competitiveness. Alexa identified her ability to stay positive during hard practices or races as a helpful factor for her to remain engaged in what she was doing. Eva spoke about finding a balance between being her own cheerleader through positive affirmation, but also holding herself accountable for meeting her goals. On the opposite end of the spectrum, Meghan explained that her negative, angry mentality only drove people away and therefore prolonged her mental and physical recovery. She explained that only when she was able to forgive her coach, her friends, and mainly herself, was she able to regain a balanced lifestyle.

Maturity was mentioned a few times in regards to dealing with adversity. Meghan mentioned that she was immature when her injury happened, and in order to cope with her emotions, she needed time away from the sport to gain some perspective and grow as a person. Dina mentioned maturing as a result of experiencing adversity. After Dina herniated two discs in her back, because she would not stop during competition, she

realized that as she got older she needed to care for her body more; now she is much more careful with how she approaches competition and training.

Lastly, Galli and Vealey identified competitiveness as a personal resource that influenced coping strategies. Many non-elite rowers cited competitiveness as a factor that helped them continue while facing hardship. Mary described how although she has been experiencing chronic pain in her hands, she continues rowing because she does not like to loose. Similarly, William described competitiveness as a driving force between his commitment and motivation to the sport. Meghan described being extremely competitive as what forms the backbone of her athletic identity, which she was in the process of forming on her new team. Rowing, by nature of the sport and of racing in general, is a very competitive sport. Even inter-squad racing is very competitive and therefore many non-elite rowers cited this as a reason that they first got into the sport and remain in the sport.

The place where the present model seemed to deviate from Gally and Vealey's (2008) model is in the conceptualization of personal resources influencing the process of agitation. Clearly the two models have built the structure similarly, however, while Galli and Vealey (2008) and Galli (2005) only describe the personal resources that influence agitation, the present model postulates that there is a period of resource assessment wherein an individual takes stock of the resources available to them, including proactive and reactive elements, and then develops, either formally or informally, a strategy moving forward. For example, when her doctor told Alexa that she would need to take a few weeks off, she did, but by the end of the first week she began to feel helpless and decided to change something. In order to change, she consciously made a plan consisting

of practicing mindful meditation and positive thinking in order to continue to play through the pain. This element of resource assessment is a vital difference between these two conceptualizations. Whereas the present model accounts for more intentionality in the process, Galli and Vealey's conceptualization leaves out any understanding of the underlying processes in the relationship between personal resources and resilience. That being said, it is up for debate whether this is a true difference in the resilience process of elite and non-elite athletes or is an analytical discrepancy between researchers; notwithstanding, the two models conceptualize similar resources as having an effect on resilience.

Along side personal resources, Galli and Vealey (2008) and Galli (2005) identified two sociocultural influences as having an impact on the process of agitation: (1) social support, and (2) cultural/structural factors. The most prevalent similarity between the present model and Galli and Vealey's model is the importance of social support. In the social support dimension there were similarities and differences to how support was conceptualized in the process of resilience. Social support, in Galli (2005), was understood in four categories: (1) emotional support, (2) esteem support, (3) informational support, and (4) tangible support. All four of these types of support were present in experiences of non-elite athletes, however, it was not the type of social support that was the most important, rather, it was the individual's perception of the support and if they accepted or rejected it as helpful. An athlete can receive all of the support in the world, but if it is not the support they need or is not helpful, then it is essentially inconsequential in the resilience process. Regardless, there were two types of social support that were identified in the present study: (1) direct, and (2) indirect. There are

elements of direct and indirect support in the four types of support identified by Galli (2005). For example, Lisa experienced emotional support from her friend who, instead of asking her how her injury was, just took her out to go shopping, therefore making her feel cared for. Informational support, which is characterized by receiving useful information or guidance from a significant person or persons, would fall under the category of direct support. Meghan's relationship with her athletic trainer was a prime example of informational support because he provided a structured framework for her to rehabilitate her back; this gave Meghan a sense of control and allow her to maintain some semblance of her identity as a rower. Where Galli and Vealey's (2008) model would stop at an understanding of informational support as influencing Meghan's agitation process, the present model goes further and posits that the direct support from her athletic trainer is so strong because of its juxtaposition with the lack of support and structure she was receiving from her coach, teammates, and friends. Alice was a participant who experienced tangible support, which fell into direct support in the present study. After Alice received her chemotherapy treatments, one of her teammates would bring her food, or drive her places when she was feeling bad. Although Alice benefited much more from support of her coach by letting her continue rowing, the tangible support was still helpful for her.

Varying by priority, indirect and direct support could be likened to the concepts of emotion-focused coping and problem focused coping. Galli (2005) explores the ideas of emotion focused and problem focused coping strategies in the context of agitation. Emotion-focused coping strategies are those that are focused on the emotions produced by a problem and less about the actual problem (Crocker et al. 1998). Commonly

associated with mal-adaptive coping, emotional coping strategies could be likened to indirect support, as they both focus more on mitigating the emotional effects of the stressor. On the other hand, direct social support could be likened to problem focused coping in the sense that they are both focused on addressing the actual problem rather than the effects of the problem.

Fletcher and Sarkar (2012) described the factors that impact resilience as psychological factors. These psychological factors subsequently influence the process of challenge appraisals and meta-cognitions, which are at the heart of the resilience process in their model. These psychological factors included: (1) positive personality, (2) motivation, (3) focus, (4) perceived social support, and (5) confidence. Of particular interest is their conceptualization of social support. It was found that perception of available support was a factor in Olympic champions ability to be resilient (Fletcher & Sarkar, 2012); that is, if they felt like they had social support resources at their disposal then the effects of stress on performance were buffered. This finding begins to resemble the findings of the present study in that there are elements of meta-cognition in perception of social support. In the present study it was found that there were a number of elements that influence perception social support including, identity, context, values, and relationship appraisals. Based on elements of trust and honesty, relationship appraisals are the foundation of experiencing social support. For instance, in a situation where you could use some support, two individuals approach you, one is a trusted friend and one is a stranger. Who are you going to listen to when they offer words of wisdom? This is an extreme example, but illustrates the point well. Though Fletcher and Sarkar did not explore how social support was perceived, they did posit that trust and respect between

social agents was important in the support process, "In the present study, trust and respect formed the basis of perceived support for the various social agents particularly during the latter stages of the athletes' careers when such relationships had been established." Furthermore, in the "Future Directions" section, Fletcher and Sarkar argue that more work is needed to understand the relationships of trust and respect within social support:

> Future research…should also consider the perceptions of significant others surrounding these athletes, such as coaches, parents, partners, and members of the organizing committee. For example, scholars should further explore the influence of affective ties (e.g., trust and respect) between key social agents on athletes' resilience. Sport psychology researchers should further investigate the three major components of meta-cognition (viz. meta-cognitive knowledge, skills and experience) since they appear to be crucial, yet largely untapped, factors in resilience in sport.

Therefore, the present study continues along the path that Fletcher and Sarkar have cleared in understanding how social support works in resilience. It is believed that, although there are minute differences in how the data was represented, both elite and non-elite athletes have multidimensional requirements when it comes to effective social support. First, the athlete must perceive that there is social support available, and second, the athlete must perceive the support provided as helpful, based on a number of factors.

Although other elements of individual's responses to adversity in the present study were not discussed in Fletcher and Sarkar (2012) or Galli (2005), recent research has concentrated on some of the same points. For example, in the present study a common theme in response to adversity, especially with regards to injury or sudden traumatic experience, was distancing from the situation through anger or blame directed toward an external individual or entity; that is, they attributed the negative emotions or feelings to something or someone external to themselves. The concept of one's

attributional style has been thoroughly research and has been identified as they way people explain their successes or failures (Galli, 2005). Recent research on attributional style has found that those who are able to separate a negative event from themselves, by their explanation of the event, are generally more likely to be resilient (Peterson & De Avila, 1995). Weiner (1992) identified three dimensions of explanations that people give for their successes or failures: (1) locus of causality, (2) stability, and (3) globality vs. specificity. Locus of causality refers to individual's perception of who or what is controlling outcomes in their life; if they perceive themselves as in control, then they have an internal locus of causality, if they feel like they cannot affect their fate, then they have an external locus of control. Stability refers to if an individual perceives a negative/positive event lasting forever or for only a short period of time. Lastly, globality and specificity refers to if an individual thinks the event impacts all parts of their life, or only specific ones. Peterson and De Avila (1995) understood the three dimensions through the lens of optimism and pessimism. Individuals with an optimistic attributional style view negative events (i.e. adversities) as being influenced by external forces, being short-lived, and only affecting a small part of their lives; these people are generally more resilient. Conversely, when a person with an optimistic explanatory style experiences a positive event, they attribute it to internal forces, such as personality characteristic, they view it as stable, and they perceive that is affects many aspects of their life (Peterson and De Avila, 1995 as cited in Galli, 2005). Seligman et al. (1990) also found that those with more optimistic explanatory styles performed better following loss than those with pessimistic explanatory styles. Therefore, attempts of participants in the present study to mentally and physically distance themselves from stressors may exhibit their more

optimistic tendencies and predispose them to more resilient outcomes.

Resilience as a Trait, Process, or Outcome

Both existing models of resilience in elite sport argue that resilience is a process with a number of factors that influence the outcomes. Similarly, the present study conceptualizes resilience as a process that is influenced by elements that occur preceding and following the adversity. The differences that were identified between the present study and existing studies were in the actual explanations of resilience. Galli (2005) explains how resilience "works" based on their research:

> Many athletes described experiencing a wide range of unpleasant feelings and mental struggles as a result of adversity. They also discussed responding to adversity with various cognitive and behavioral strategies that were influenced by certain helpful personality characteristics that they possessed. Social support was mentioned as being a key for all of the athletes, and positive outcomes were seen to occur from adversity in the form of learning, gaining perspective, and self-improvement…one of the major themes that emerged from the interviews was that the athletes identified overcoming their adversities as a process over time. They discussed how change was gradual, and often involved multiple shifts in thought. Successfully overcoming adversity was also dependent on a variety of individuals being there to listen and provide support throughout this time period.(p.137)

One of the distinguishing factors in the present study is the element of intentionality and deliberate thought involved in the resilience process. Galli (2005) and many other researchers (Fletcher & Sarkar, 2012, Galli & Vealey, 2008) speak in generalities about how resilience actually works. Resilient individuals are generally described as adopting a number of coping mechanisms that are influenced by some other parts of their life such as personality and environment, however, what exactly does it mean to be "influenced" by a trait or one's environment? The present study attempts to answer this question

through understanding this part of the process in more meta-cognitive terms. The present findings indicate that there is a period of time when rational, deliberate thought, is employed to determine a course of action in regards to resilience. Proactive elements and reactive elements are both taken stock of in the resource assessment and then resiliency strategies are formed utilizing resources identified, such as a network of support, a positive outlook, and taking a more long-term perspective. Those who are more adept at creating this plan and structure, while remaining flexible to change, are more able to be resilient. This comparison between existing studies may be another instance where differences in interpretation by the researcher may be the origin of differing models, not the result of differing experiences between elite and non-elite athletes. However, the underlying finding was that resilience, in both elite and non-elite athletes, was described as a process instead of a trait or outcome.

Overall Resilience Themes

One of the major differences between the present study and existing literature was that the present study attempted to understand the underlying processes behind participant's thoughts and behaviors during their experiences of adversity and resilience. For example, the present study went into considerable depth on the relationships between perceived control and intensity and duration of adversity, or the relationship between social support and placement of the spectrum of sport identity, or lastly, the relationship between work, life, sport balance, and resilience. This section will attempt to place these relationships in the current literature surrounding identity and sport, control and resilience, and balance and well-being.

Athletic identity refers to the extent to which an individual identifies with the athlete role in their lives and the extent to which they label themselves as an athlete (Burns et al., 2012). Research on athletic suggests that those who have a stronger athletic identity generally have higher levels of athletic satisfaction (Burns, Jasinski, Dunn, Fletcher, 2012; Brewer, Boin, Petitpas, 1993). Furthermore, Burns et al. (1993) found that a higher athletic identity was positively correlated with concerns about not playing sports and fear of getting injured. The present study found that those who were at difference stages of forming their athletic identity perceived and responded to social support in different ways. Although different relationships were explored, the underlying process of experiencing adversity differently as sport identity strengthens was consistent between existing literature and the present study.

The concepts underlying research on explanatory style were first introduced by Seligman's (1998) research on learned helplessness. Learned helplessness essentially means someone has resorted to a state of complacence because they feel they have no control over a situation and therefore do not attempt to change the outcome, even if eventually changing an outcome is possible. For example, imagine you have two people, one person you give a puzzle that is unsolvable and you give the other person a puzzle that is hard, but solvable. You do this for a number of rounds, giving different puzzles each round, one solvable, one not, and then you give both peoples a new puzzle that is solvable. The person who continually had the unsolvable puzzle will spend less time trying to solve the new puzzle than the person who had the solvable puzzles. What has happened? The person that was given the unsolvable puzzle has adopted a negative explanation of what was happening; that is, that person feels like there is no way to

influence the outcome and therefore takes on a more complacent attitude for solving the puzzle. How does this relate to the present study? The underlying idea is that perceptions of control can influence one's motivation. In the present study, participant's perceptions of control often dictated how they responded to stressors. Therefore, it is pertinent, when examining resilience in sport, to consider the locus of control in a given situation and how that may affect responses to adversity.

Current literature on work-life-sport balance is scant because of the lack of substantive research in the area of non-elite sport. Most research on sport at this point is polarized at either the childhood and adolescent level or at the elite level. Other research has explored the physical and mental benefits of physical activity in middle-aged individuals, but no research has specifically targeted competitive non-elite athletes with regards to work-life-sport balance. The closest literature to compare this concept to is that on work-life balance for working professionals. Recent literature examined the relationship between components of work-family balance and quality of life (Greenhaus, Collins & Shaw, 2003). The results suggested that those who invested more time, were more involved, and were more satisfied with their work and family, had an overall higher quality of life than if they invested less time, were less involved, and were less satisfied with their work and family. In addition, they found that those who spent more time, were more involved, and were more satisfied with family than work, had a better quality of life. Furthermore, those who had a "work imbalance;" that is, spent more time, were more involved, and were more satisfied with work than family, had a lesser quality of life (Greenhaus, Collins, Shaw, 2003). The authors concluded that, overall, those who gave more to work than family had a lower quality of life; therefore, in relation to the present

study, one could postulate that those who had a "sport imbalance" where they gave disproportionately more resources to rowing than other areas, were more likely to experience a major adversity because of the large influence rowing has on their life.

Limitations and Future Research

A major limitation of the current study was the retrospective nature of the interviews. As was discussed in the results and discussion section, with distance from an adverse situation, perspective and perception of the situation changes. The interviews were carried out at a number of different places in the process of resilience for the participants. Some were in the midst of dealing with adversity, some were a few months out, and some were years away from it. In a way this was a strength, because it presented a variety of differing perspectives, however, it was also a weakness in terms of identifying the relative importance and prevalence of proactive and reactive elements. Future research would benefit from a longitudinal analysis, conducting interviews directly after an injury, a few weeks out, a few months out, and a year out. This would provide a very comprehensive picture of how the process unfolds.

Another limitation is that rowers in the study may have self-selected to an extent. On the recruitment flyer, potential participants were identified as those rowers who felt that they had been through some adversity and had demonstrated resilience. If this is the case, then this sample would not be a representative sample of non-elite rowers. Although the point of grounded theory is not to generalize findings, it would have been helpful to examine more "negative cases," in which rowers did not demonstrate resilience. Examining the process of not being resilient may in fact offer valuable information on

how to be resilient. Future research should consider speaking with those athletes who considered themselves to have not practiced resilience in a given situation.

There are also a number of practical implications for this study. First, and foremost, the grounded theory presents a model for coaches, athletes, and administrators at rowing clubs to conceptually understand resilience in non-elite rowers. In addition, the model may help coaches and athletes understand the importance of self-knowledge, identity, control, and balance in the context of resilience. If athletes can identify where their emotions surrounding adversity are coming from, then they will be able to address them more completely by initiating appropriate resiliency strategies. Furthermore, if athletes understand the resources at their disposal (viz. proactive and reactive elements) then they can identify their strengths and weaknesses when dealing with adversity. If athletes understand where their resources lack then they may be able to address those gaps and cultivate those resources.

Conclusion

The purpose of this thesis was to describe and explain the processes underlying the phenomenon of resilience in non-elite athletes. The central question was centered on understanding the differential processes in resilience between elite and non-elite athletes. The present study examined the experiences of resilience and adversity in 12 non-elite rowers using a grounded theory methodology. The findings indicated that resilience was conceptualized as a process that is influenced by a number of factors coming before and after the adversity is experienced (i.e. proactive elements & reactive elements). Furthermore, it was posited that in forming resiliency strategies, there is an element of intentionality in the form of one assessing the resources available to them and then adopting one or a number of strategies toward resilience. The experience of coping with adversity led to a feedback of information and knowledge to the proactive elements, which left participants better equipped to faced adversity in the future. In terms of comparing elite to non-elite models of resilience, it was found that the underlying processes of resilience were employed by both elite and non-elite athletes, however, the degree to which elite athletes have been put in adverse situations may vary, and therefore, they may have more "practice" being resilient. Elite athletes have adapted to the high pressure, high stress environment, but use very similar mechanisms in resilience.

Appendix

Consent for Participation in Research

Title: A grounded theory of psychological resilience in club level rowers

Introduction

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. The person performing the research will answer any of your questions. Read the information below and ask any questions you might have before deciding whether or not to take part. If you decide to be involved in this study, this form will be used to record your consent.

Purpose of the Study

You have been asked to participate in a research study about your experiences of adversity and resilience in rowing. The purpose of this study is to construct a theory about how recreational athletes of all ages deal with set-backs in their sport and how this may interact with their ability to deal with set-backs outside of sport.

What will you to be asked to do?

If you agree to participate in this study, you will be asked to:

1) Complete a brief demographic questionnaire (e.g. date of birth, gender, ethnicity, experience with rowing)
2) Participate in two separate 90-minute interviews

This study will take approximately three hours total (two 90-minute sessions) and there will be 11 other people in this study.

Your statements will be audio-recorded.

What are the risks involved in this study?

The risks for this study are minimal and no greater than those found in everyday life. The only foreseeable risk is that you will be asked to recall adverse events in your life and describe the situations in a very detailed manner. We anticipate that you may become uncomfortable when recalling such events. In order to minimize risk we will continually stress that you are not required to discuss topics which make you uncomfortable and may withdraw from the study at any point with absolutely no consequence.

What are the possible benefits of this study?

The possible benefits of participation are that you will have the option to receive a personalized report-of-findings which will include an analysis of your coping strategies and an analysis of your resilience process as extrapolated from the

qualitative interviews. This report may be beneficial in future adverse situations as you will be more aware of your strengths, weaknesses and overall coping processes.

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin or with Austin Rowing Club in any way.

If you would like to participate please return this form to the primary investigator, Taylor Brown. You will receive a copy of this form.

Will there be any compensation?

You will not receive any type of payment for participating in this study.

How will your privacy and confidentiality be protected if you participate in this research study?

Your privacy and the confidentiality of your data will be protected by assigning each participant a code. From the inception of the study your name will not be used and no identifying information will be collected. Your information will be stored on a secure computer in a secure location and will only be accessible by the co-investigators of this study.

If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate it with you, or with your participation in any study.

If you choose to participate in this study, you will be audio-recorded. Any audio-recordings will be stored securely and only the research team will have access to the recordings. The recordings will be labeled with the date of the interview, followed by the code which you have been assigned. Recordings will be kept for one calendar year after the study is published and then erased.

Whom to contact with questions about the study?

Prior, during or after your participation you can contact the researcher **Taylor Brown** at 302-373-6312 or send an email to taylor_brown@utexas.edu for any questions or if you feel that you have been harmed.

This study has been processed by the Office of Research Support and the study number is 2014-02-0100.

Whom to contact with questions concerning your rights as a research participant?

For questions about your right or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Office of Research Support by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Participation

If you agree to participate please return this form to co-investigator, Taylor Brown.

Signature

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

_____ I agree to be audio-recorded.
_____ I do not want to be audio-recorded.

_____
Printed Name

_____ _____
Signature Date

As a representative of this study, I have explained the purpose, procedures, benefits, and the risks involved in this research study.

_____
Print Name of Person obtaining consent

_____ _____
Signature of Person obtaining consent Date

Interview Guide

I. Demographic questions

A. What is your primary sport? How long have you participated in this sport? What is your current level of participation?

B. How old were you when you started competing? How old were you when stopped or changed levels? How old are you currently?

C. What are some other activities (including sports) that you like to do?

II. Preliminary rapport building

A. Tell me why you play your sport - what do you like about playing?

B. What do you enjoy most about your sport?

C. What sport accomplishment are you most proud of?

C. Describe the type of competitor you are.

III. Explanation of focus of research

A. We're interested in athletes' experiences of adversity in sport

B. Adversity means challenges, obstacles, stressors, and setbacks that you've faced as an athlete

IV. Identification of adversity experience and description of resilience process

Tell me about the biggest adversity that you have faced as an athlete...

A. Describe your feelings related to this adversity

1. How did you respond to this adversity?

2. How did this adversity make you feel?

3. What did you think about when facing this adversity?

B. How did you "handle" this obstacle?

1. Do you feel you have been successful in overcoming this adversity?

a. If yes, how so?

b. If no, what would it mean for you to successfully overcome this obstacle?

2. Describe the process you used to deal with it? How helpful was this?

3. Did other people help you deal with it? In what ways? How helpful was this?

4. Tell me what you see as the most important thing you did to deal with this obstacle.

5. Describe how you feel you acquired the ability to successfully overcome this obstacle.

6. Personal resilience factor probes (if needed):

a. Your physical skill, training, health...

b. Your motivation as an athlete or person...

c. Managing your emotions...

d. Thinking a certain way, making decisions, sorting out thoughts...

e. Important values...

7. Envirosocial probes (if needed):

a. Team dynamics...

b. Support from others (teammates, friends, coaches, family)...

c. Describe the influence of your coach in this process.

C. What was the result of the way you handled this obstacle?

1. Describe the effect this had on you as an athlete.

2. Describe the effect this had on you as a person.

3. How would you (have you) feel (felt) and respond(ed) if faced with this obstacle or a similar obstacle again?

Follow questions with probes if necessary

V. Adversity in sport / protective and vulnerability factors

A. Describe other obstacles that you typically face or that you've faced at one point that you "took in stride." What things helped you or allowed you to take this particular obstacle "in stride?" What coping strategies were successful for you, and why do you feel that you were unable to successfully use these in the case of the obstacle we have been discussing?

IV. Relationship between resilience inside and outside of the sport context

A. Please describe your experience with adversity in other aspects of your life

B. How did you handle these experiences?

C. How were these experiences similar/different to your resilient experiences in sport?

D. Has your process of dealing with adversity changed since beginning your sport? How?

IIV. Final Question

A. Is there anything that you would like to add that we have not discussed, but that you feel would add to my understanding of your experiences?

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